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**Assessment Report on the
2017 Channel Sampling, Drilling, and Historical Core Re-Assay Program
East Bull PGM Property, Gerow Township,
Sudbury Mining Division**

Claims 4272475, 1227910
G-3181, Gerow Township, Sudbury Mining Division
UTM WGS84 Zone 17T 405222mE 5141399mN;
Lat 46° 25' 10" N Long 82° 14' 0" W
NTS 41J 08 – Whiskey Lake

For:
Pavey Ark Minerals Inc.
Client number 411465

Prepared By:
Richard H. Sutcliffe, P.Geo. (Client number 225603)
100 Broad Leaf Crescent,
Ancaster, ON, L9G 3R8

December 31, 2017

Executive Summary

This assessment report documents the results of exploration work completed between May to December 2017 by Pavey Ark Minerals Inc. (“Pavey Ark”) on the company’s East Bull PGM Property located in Gerow Township, Sudbury Mining Division, Ontario. The work includes: 77 meters of channel sampling in 6 channels resulting in 79 assay samples; 320 meters of diamond drilling in 3 drill holes for a total of 92 assay samples; cataloguing and re-sampling of core originally drilled by Freewest Resources Canada Inc. (“Freewest”) in 1999 and 2000 for a total of 241 assays in 8 holes; and a differential GPS (DGPS) survey of all located historical drill casings and Pavey Ark channel samples.

The work was conducted on contiguous claims 1227910 and 4272475 covering 31 claim units (496 ha) located in Gerow Township in the Sudbury Mining Division, Ontario. The Property is located 26 km northwest of Massey, Ontario and is accessed by route 553/810 that extends north from the Trans-Canada Highway 17 at Massey. The work for this report took place between May 4, 2017 and December 31, 2017. Project management and supervision was by R. H. Sutcliffe, P.Geo. The total assessment expenditure is \$176,919.00. The work was completed under an MNDM 3-year Exploration Permit PR-17-11153 that is valid until August 20, 2020 and a 2-year Exploration Plan PL-17-10722 valid until April 19, 2019.

The East Bull Platinum Group Metals (“PGM”) Property contains platinum (Pt), palladium (Pd), gold (Au), copper (Cu) and nickel (Ni) mineralization that extends over an east-west strike length of 3.5 km and is associated with the north-dipping southern contact of the Early Proterozoic East Bull Layered Gabbroic Intrusion. The East Bull Intrusion has been sporadically explored for base metal and PGM since 1952. Previous exploration work on Pavey Ark’s East Bull Property was mainly by Freewest and Mustang Minerals Corp. (“Mustang”) in 1999 and 2000. Freewest drilled 27 holes for a total of 2,902 m and carried out extensive surface trenching on present claim 4272475. Work by Mustang on the eastern part of the Property (claim 1227910) included 11 drill holes for a total of 1,766 m. Pavey Ark has recovered over 90% of the Freewest core and has a complete set of drill logs and assay certificates for the Freewest drilling. Drill logs and assay certificates for the Mustang drilling were available in the assessment records, however, the original Mustang core has been destroyed.

Dr. Colin Bowdidge, P.Geo., completed a differential GPS (DGPS) survey of the 6 channels sampled by Pavey Ark, 4 located Freewest casings, 9 of 10 located Mustang casings, and the Freewest grid origin claim post. The survey was completed between October 24, 2017 and November 2, 2017 using a TopCon HiPer II Differential GPS.

A-Star Prospecting of Thunder Bay completed 77 meters of channel sampling for Pavey Ark on the western part of the Property (claim 4272475) in July 2017 and October 2017. The channels replicate 6 blast trenches sampled by Freewest in 1999/2000 on Freewest lines 3+50W, 4+70W, 6+40W, 7+40W, 13+50W and 14+00W. The channels were cut using a diamond blade saw and

samples were nominally 1.0 m in length. A total of 79 channel samples plus an additional 6 blanks and 6 standards were submitted for assay.

EDCOR Drilling Services Inc. of Toronto completed 3 BQTK diamond holes for a total of 320 m between October 29 and November 9, 2017 with a D1 Multi-power diamond drill. Holes EB17-01 and EB17-03 twinned Mustang holes ME00-19 and ME99-16 respectively. Hole EB17-02 was an in-fill hole drilled below EB17-01. The core was logged, sawn and sampled at the East Bull Lodge. A total of 92 samples of sawn ½ core with a nominal length of 1.0 m plus an additional 4 blanks and 4 standards for QA/QC purposes were submitted for assay. In addition, Mr. Antoine Yassa, P.Geo. of P&E Mining Consultants Inc. of Brampton, Ontario, independently selected and sampled an additional 6 duplicate samples of ¼ core.

In June 2017, Clark Exploration Consulting Inc. of Thunder Bay, Ontario recovered and catalogued the 1999/2000 Freewest core that had been stored outdoors at the East Bull Lodge. After cataloguing, the core was estimated to be over 90% complete. In October and November, 2017, Craig Maitland of Clark Exploration resampled the mineralized intervals in 7 Freewest drill holes (321-99-02, 321-00-02, -07, -10, -12, -17, -18). A total of 217 samples of ¼ core with a nominal length of 1.0 m were cut and submitted for re-assay. In addition 10 blanks and 11 reference standards for QA/QC requirements were also submitted. Mr. Antoine Yassa, P.Geo. of P&E Mining Consultants Inc. of Brampton, Ontario, independently selected and submitted an additional 24 samples of ¼ core from Freewest drill hole 321-00-21. Mr. Yassa included 2 standards and 1 blank in the sample submission.

The Pavey Ark assay samples from channels and drill core were analyzed for Pt, Pd, Au by 50 g fire assay with ICP-OES finish and for Ag, Co, Cu, Ni by total digestion with an ICP finish at Actlabs, in Ancaster, ON. Actlabs also determined the specific gravity of 60 samples of sawn ½ core from holes EB17-01, 02 and 03. The samples from Freewest hole 321-00-21 and Pavey Ark hole EB17-01 that were independently selected by P&E were analyzed for Pt, Pd, Au by a 50 g fire assay with ICP-AES finish, for Rh by 30 g fire assay with ICP-MS finish, and for Ag, Co, Cu, Ni by 4-acid digestion with ICP-AES finish at ALS Canada Ltd.'s laboratory in Rouyn-Noranda, QC.

The surface channel sampling, diamond drilling and core re-assay program was successful in confirming the significant PGM and base metal values determined by historical Freewest and Mustang work in 1999 and 2000. In parallel with the current program, Pavey Ark has engaged P&E Mining Consultants Inc. of Brampton Ontario to initiate work on a NI43-101 technical report and resource estimate for the East Bull PGM Property. The current program has validated the historical assays as being acceptable for use in a NI43-101 resource estimate and has provided a QA/QC program with certified reference materials, duplicates and blanks. Based on the validation work and QA/QC program, Pavey Ark will be proceeding with utilizing the Mustang and Freewest assay database combined with the Pavey Ark results for a NI43-101 resource estimate.

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1.0 Introduction

This assessment report documents the results of exploration work completed between April to December 2017 by Pavey Ark Minerals Inc. (“Pavey Ark”) on the company’s East Bull PGM Property located in Gerow Township, Sudbury Mining Division, Ontario. Previous exploration on the Property by Freewest Resources Canada Inc. (“Freewest”) and Mustang Minerals Corp. (“Mustang”) in 1999 and 2000 included 38 drill holes for a total of 4,668 m drilling and extensive surface trenching. The work in 2017 was managed by R.H. Sutcliffe, P.Geo. and includes: 77 meters of channel sampling in 6 channels resulting in 79 assay samples; 320 meters of diamond drilling in 3 drill holes for a total of 92 assay samples; cataloguing and re-sampling for a total of 217 assays from core originally drilled by; and a differential GPS (DGPS) survey of all located drill casings and Pavey Ark channel samples. P&E Mining Consultants Inc. of Brampton, Ontario, independently selected and submitted an additional 6 duplicate samples from one Pavey Ark drill hole and an additional 24 samples of ¼ core from a Freewest drill hole.

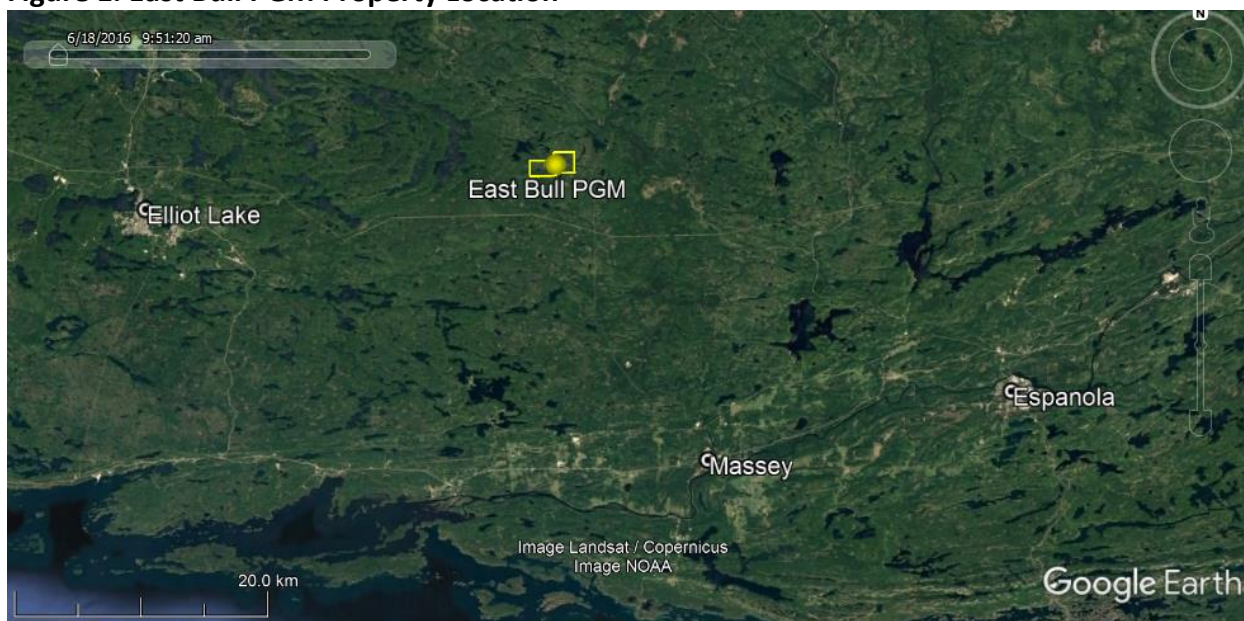
The work was done to augment and validate the historical drilling and assay results and to provide QA/QC documentation to enable the Freewest and Mustang drill data to be utilized in a NI43-101 resource estimate for Pd, Pt, Au, Ag, Cu, Ni, Co mineralization. The total assessment expenditure is \$176,919.

2.0 Location and Access

The East Bull PGM Property is located 26 km northwest of the town of Massey, Ontario (Figure 1) and 90 km west of the city of Sudbury, Ontario. The Property is accessed by route 553/810 an all-weather road that extends north from the Trans-Canada Highway 17 at Massey, Ontario.

At approximately 31 km north of Massey on route 553, the Project is accessed by turning left onto a gravel bush road known locally as the “AECL Road”. The AECL Road extends from route 553 for a total distance of 4 km and terminates in the northwest corner of the Property on claim 1227910. The AECL Road is readily passable by vehicles during the spring through autumn but is not maintained in winter. From the terminus of the AECL Road, an ATV trail continues west through the property onto claim 4272475.

Figure 1. East Bull PGM Property Location



Source: Google Earth 2017

3.0 Claim Holdings and Property Disposition

The East Bull PGM Property is comprised of 2 contiguous staked claims (4272475, 1227910) covering 31 claim units (496 ha) in central Gerow Township (Table 1). The claims are registered in the name of Pavey Ark Minerals Inc., a private Ontario company. Pavey Ark acquired claim 4272475 by staking in 2016 and subsequently purchased claim 1227910 from Mustang. A claim map is provided as Map 1. The assessment work was performed on both of the claims.

Table 1. List of East Bull Property Claims held by Pavey Ark Minerals Inc.

SUDBURY Mining Division - 411465 - PAVEY ARK MINERALS INC.

Township / Area	Claim Number	Recording Date	Claim Due Date	Status	Percent Option	Work Required	Total Applied	Total Reserve	Claim Bank
GEROW	1227910	1998-Jun-09	2019-Jun-09	A	100 %	\$6,400	\$115,200	\$0	\$0
GEROW	4272475	2016-Nov-17	2018-Nov-17	A	100 %	\$6,000	\$0	\$0	\$0

The exploration work was completed under an MNDM 3-year Exploration Permit PR-17-11153 that is valid until August 20, 2020 and a 2-year Exploration Plan PL-17-10722 valid until April 19, 2019.

4.0 Previous Work

Moore and Armstrong (1943) completed the initial geological mapping of the East Bull Lake area and recognized the East Bull Lake Intrusion as a Proterozoic gabbroic intrusion. As summarized by Wood (2001), Soever (2001) and Foy (2012) following this work, between 1952 and 1962, a number of mining and exploration companies including Noranda Mines Inc., El Pen

Ray Oil and Mines, Silcross Copper Mines Ltd., and Mining Corporation of Canada undertook exploration for Cu-Ni sulfide mineralization in the southeastern part of the East Bull Lake Intrusion. Geophysical work (ground magnetometer and EM surveys), trenching and diamond drilling were carried out. This work identified pyrrhotite-chalcopyrite mineralization in gabbroic rocks and diabase dykes along the southern margin of the intrusion, in what is now recognized as the Parisien Lake deformation zone, and in the area to the east of Moon Lake. Between 1982 and 1989 Atomic Energy of Canada Ltd. (AECL) completed mapping, outcrop stripping, ground and airborne geophysics, and drilled 4 holes (2,618 m) to assess the East Bull Lake Intrusion as a potential radioactive waste storage/disposal site.

The first documentation of PGM mineralization was by Gallo Exploration in 1989 to 1990. Gallo completed stripping, blasting, mapping and sampling of the sulfide occurrences plus VLF-EM and airborne magnetic surveys. This work identified significant PGM mineralization with assays from trenches of up to 1.3 g/t Pt and 4.2 g/t Pd associated with contact-type mineralization and values up to 0.8 g/t Pt, 3.9 g/t Pd, 0.68 g/t Au, 9.4% Cu, and 5.3% Ni in remobilized semi-massive sulphides in Parisien Lake Deformation Zone.

The East Bull Lake Intrusion was explored by Inco Exploration between 1991 and 92. Work included mapping and diamond drilling (5 holes for 1,512m) with assays that included 0.2 g/t Pt, 0.95 g/t Pd, 0.57% Cu, 0.22% Ni and 0.35 g/t Pt, 3.08 g/t Pd, 14.7% Cu, 0.49% Ni. In 1995, WMC International Ltd. completed mapping, rock, soil, and till sampling. The "Neck Zone" (former Peck Grid) was reported to contain a continuous zone of 5% blebby sulphides with a best assay of 0.91g/t Pt, 4.45 g/t Pd, 0.39 g/t Au, 0.53% Cu, and 0.11% Ni.

In parallel with the exploration work, a number of studies of the East Bull Lake Intrusion and associated PGM-Cu-Ni mineralization were completed at Laurentian University in Sudbury. These included an M.Sc thesis by Born (1979) on the Geology of the East Bull Lake Layered Complex, District of Algoma, Ontario, an M.Sc. thesis by Chubb (1994) on the Petrogenesis of the Eastern Portion of the Early Proterozoic East Bull Lake Intrusion, and Ontario Geological Survey sponsored studies of the East Bull Lake Intrusion by Peck and James between 1990 to 1995.

The main exploration effort on the area covering the current Pavey Ark's East Bull PGM Property was completed by Freewest (on present claim 4272475) and Mustang on claim 1227910 between 1998 and 2000.

The Freewest claim was formerly known as the Folsom Lake Property. In 1998 Freewest discovered the Valhalla showing and obtained surface grab samples that assayed up to 1.35 g/t Pt, 3.15 g/t Pd, 0.23 g/t Au and 0.7% Cu. Subsequently, between 1999 and 2000 Freewest completed prospecting, blasting, ground geophysics, and drilled 27 holes for a total of 2,902m. Most of the holes intersected PGM mineralization and included hole 00-21 with 1.96 g/t Pt+Pd+Au over 24m.

For the 2000 Freewest program samples were analyzed by XRAL Laboratoires, Rouyn-Noranda, Quebec. Au, Pt, Pd were analyzed by fire assay on a 30 g sample with a direct current plasma (DCP) finish. The lower reporting limits for this method were 1 ppb for Au and Pd and 10 ppb for Pt. Ag, Cu and Ni were reportedly analyzed with a partial digestion with an atomic absorption (AA) finish. Detection limits are 0.02 ppm for Ag and 2 ppm for Cu and Ni (Lariviere, 2001).

In 1998 Mustang acquired the former Gallo Property and then newly staked claims from a group of Sudbury area prospectors. Mustang re-logged the AECL holes and initiated drilling on the Moon Lake grid east of the current Pavey Ark Property. In 1999, Mustang started work on the Bullfrog Grid that is located on claim 1227910. Between 1999 and 2000 Mustang completed mapping, magnetic and IP surveys and drilled 11 holes for a total of 1,766 m on the Bullfrog Grid. The exploration results demonstrated the Freewest Valhalla Zone extended onto the Mustang property and had a strike length totaling over 2.5 km. Mustang intersections on the included ME00-17 with 20 m @ 1.6 g/t PGM, ME00-19 with 12 m @ 2.5 g/t PGM.

In 2001 Falconbridge Limited optioned the property from Mustang. Between 2001 and 2002, Falconbridge completed prospecting, mapping, trenching, ground and airborne geophysics, and drilled 6 holes for a total of 860 m. Drilling was done on the Parisien Lake grid, east of Pavey Ark's property, and encountered anomalous PGM values. In 2007, Mustang optioned the property to Western Areas NL, an Australian company. Between 2008 and 2012, Mustang and Western Areas completed a helicopter VTEM survey, Moving In-Loop, Fixed Loop EM (MLEM and FLEM) and ground TDEM surveys on the Parisien and Bullfrog Grids. Drilling at the Parisien Grid returned anomalous PGM values. In 2012, at the Bullfrog Grid, three existing Mustang holes (ME00-14,19, 21) were extended to test TDEM anomalies in the footwall of the Bullfrog trend. No significant sulphides or appreciable results were returned and BHEM surveys responded to the known Bullfrog mineralization.

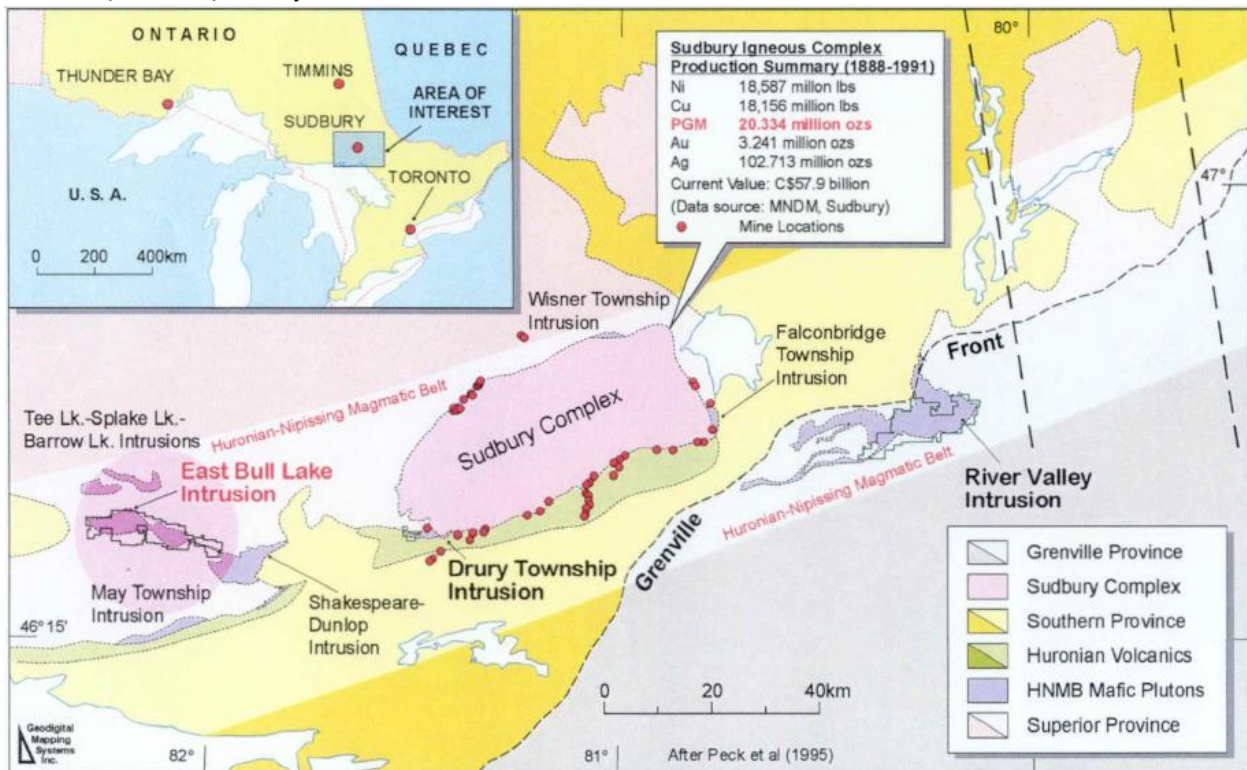
For the 1999 and 2000 programs, Mustang Minerals used XRAL Laboratories in Rouyn-Noranda, Quebec for analyses. Samples were assayed Au, Pt, Pd, Rh, Cu and Ni. All precious metal concentrations were determined using fire assay (30g charge) followed by a direct-coupled plasma/mass spectrometer (DCP) finish. The detection limits for a one assay ton (30g) sample are 1ppb for Au and Pd, and 10ppb for Pt. Base metal concentrations were determined by atomic absorption spectrometry (AA) after 0.25 to 0.3g of the pulp was subjected to a nitric aqua regia digestion (Wood 2001).

Additionally in 2012, Western Areas NL tested two deep airborne ZTEM magnetic-magnetotellurics ("MT") targets in the central part of the East Bull Gabbro Intrusion. Holes EB12-05 (955m) and EB12-06 (973m) targeted coincidental ZTEM-magnetic and Titan 24 MT anomalies in two separate locations. EB12-05 intersected disseminated cpy grading 0.44% Cu, 2602ppb Pt, and 15677ppb Pd but no other sulphides or lithological features to explain the anomalies. A BHEM survey for EB12-06 did detect an anomalous partial response at the bottom of the hole.

5.0 Geology

Pavey Ark's East Bull PGM Property is underlain by gabbroic rocks of the Paleoproterozoic East Bull Lake Intrusive Suite. The ca. 2.48 Ga East Bull Intrusive Suite (Easton et al. 2010) consists of several intrusions of dominantly gabbroic anorthosite that occur in both the Southern and Grenville provinces in the Sudbury area between Elliot Lake and North Bay (Figure 2). The 3 largest intrusive bodies of the Suite are the East Bull Lake and Shakespeare Dunlop (or Agnew Lake) Intrusions in the Southern Province and the River Valley Intrusion in the Grenville Province.

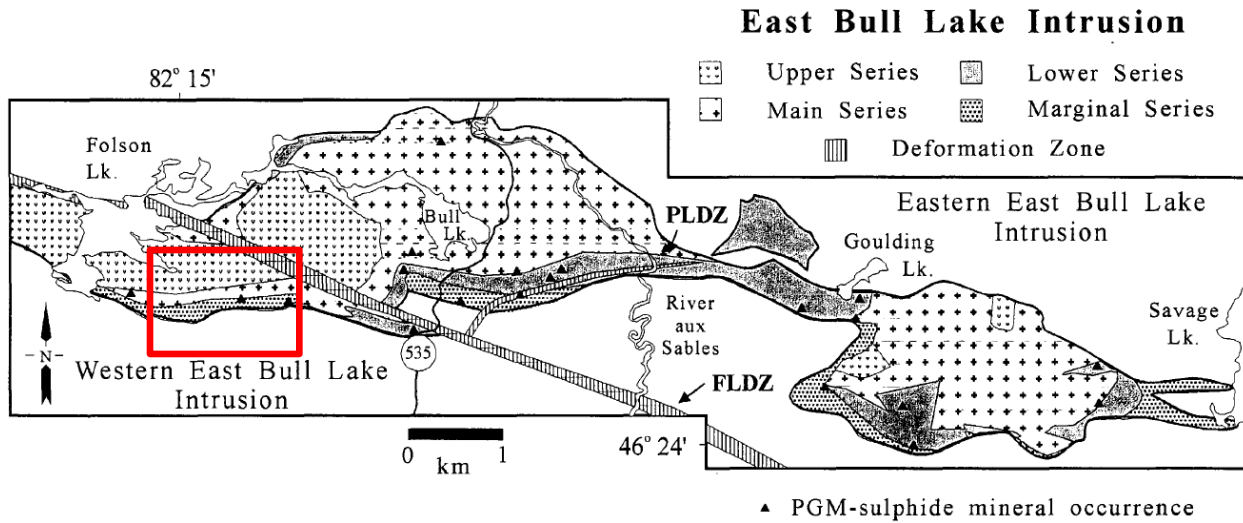
Figure 2. Location of Early Proterozoic gabbroic rocks of the East Bull Intrusive Suite (Peck et al. 1995; Wood, 2001)



Easton et al. (2010) consider that the intrusions of the East Bull Lake Intrusive Suite occur as an east-northeast-trending belt along the boundary of the Archean Superior and the Proterozoic Southern provinces in Ontario, Canada. The East Bull Lake intrusive suite is part of a regional, Paleoproterozoic, bimodal magmatic event resulting from a mantle-plume driven, intracontinental rifting event. This event formed a major basin, filled by sedimentary and igneous rocks of the Huronian Supergroup. Intrusions of similar age and composition in Finland and Wyoming were once contiguous with the East Bull Lake Intrusive Suite prior to tectonic dispersion during the Proterozoic. Several younger magmatic events post-date the East Bull Lake Intrusive Suite and include: the 2.15 Ga Nipissing Magmatic Event; the 1.85 Ga Sudbury Igneous Complex; and 1.25 Ga olivine diabase dikes.

Easton et al. (2011) describe the East Bull Lake Intrusion as consisting of 2 interconnected magma chambers that locally exceed 1 km in thickness that are connected by a dike like conduit (Figure 3). Pavey Ark's East Bull PGM Property is located on the southern contact of the larger western magma chamber of the East Bull Lake Intrusion.

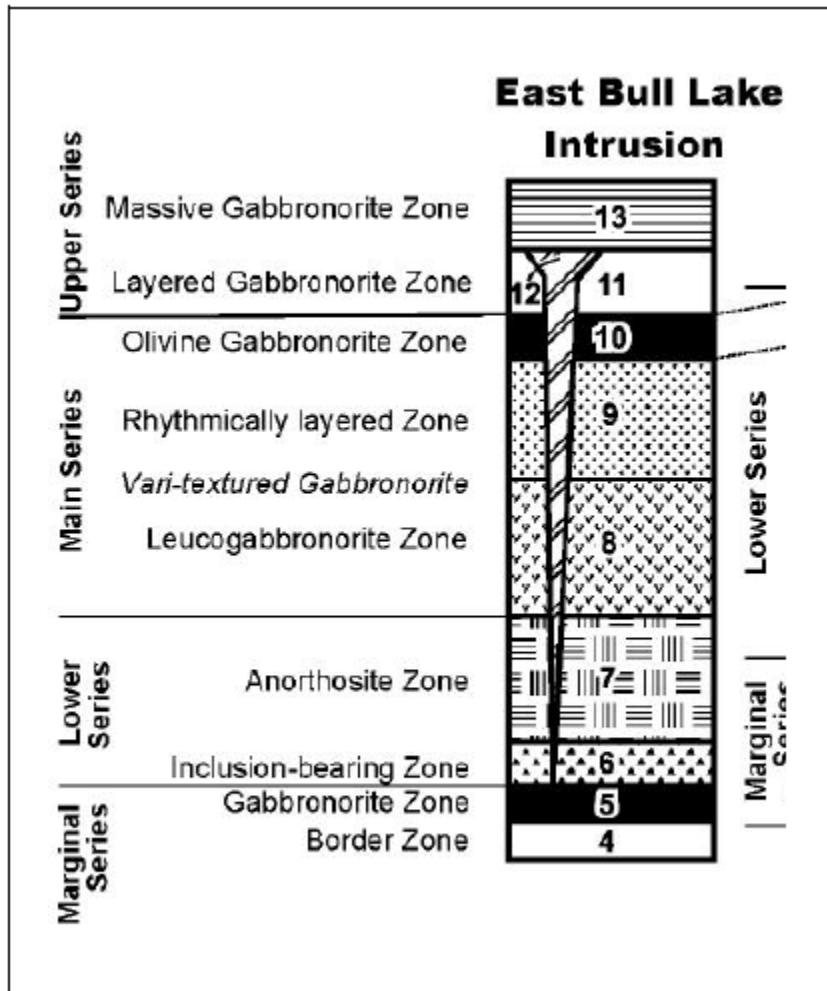
Figure 3. Simplified geology of the East Bull Lake Intrusion (modified from Peck et al. 2001)



Location of Pavey Ark's East Bull Property in red.

As documented by Easton et al. (2010), the stratigraphy of the East Bull Lake Intrusion is divided into the Marginal, Lower, Main, and Upper Series (Figure 4). On Pavey Ark's East Bull PGM Property the PGM and base metal mineralization is primarily hosted in the Inclusion Bearing Zone at the base of the Lower Series. This is the main host rock for PGM in the East Bull Intrusion.

Figure 4. Stratigraphy of the East Bull Lake Intrusion (Easton et al. 2010).



The Marginal Series is transitional from Archean footwall rocks to the Lower Series rocks and may be absent with the Lower Series in direct contact with the footwall.

Border Zone – is developed as a breccia up to tens of metres thick composed of locally derived Archean footwall blocks (granite, tonalite, syenite, basalt) hosted in fine to coarse grained leucogabbro, gabbro, melanogabbro, and anorthosite.

Gabbronorite Zone – overlies the Border Zone and is typically only a few metres thick and may have developed as a chill margin to the EBLI or from late injections of mafic magma that were unable to penetrate the overlying Lower Series.

The Lower Series is composed of a lower xenolith and autolith-bearing unit (Inclusion Bearing Zone) and an overlying Anorthositic Gabbro Zone. The Lower Series hosts almost all known contact style PGE sulphide mineralization in the EBLI.

Inclusion Bearing Zone (IBZ) – occurs as either a chaotic, multi-stage breccia, or distinctive blue quartz bearing gabbro or relatively massive leucogabbro or gabbro with rare inclusions. The IBZ is typically more mafic than the overlying anorthositic gabbro.

Anorthositic Gabbro Zone (AGZ) – is a plagioclase-rich unit composed mostly of leucogabbro and anorthositic gabbro.

The Main Series is composed of three units:

Leucogabbro Zone – is composed of massive leucogabbro with poorly developed layering in the upper portion.

Rhythmically Layered Zone – is composed of gabbro and leucogabbro layers (up to tens of metres thick).

Olivine Gabbronorite Zone – comprises the upper portion of the Main Series.

The Upper Series is composed of two units:

Layered Gabbronorite Zone – is characterized by common irregular textural and modal layering

Massive Gabbronorite Zone – is composed of massive to vari-textured gabbro with grain size textural heterogeneity, pegmatoidal pods, and dendritic pyroxene masses. Similar vari-textured gabbros occur throughout the EBLI as metre-sized pods.

On Pavey Ark's East Bull Property, the gabbroic units strike approximately east-west and dip to the north at approximately 45°. From north to south, the main units encountered in the area of trenching and drilling expose the transition from the Lower Series Anorthositic Gabbro and Inclusion Bearing Zones to the Marginal Series Gabbronorite Zone. The main lithologies are characterized as follows:

Anorthositic gabbro – Medium-grained to coarse-grained and pegmatitic leuco-gabbro, locally anorthosite patches, locally with 5 to 10% intercumulus leucoxene, dark green to grey, altered plagioclase and mafics;

Inclusion Bearing Zone (IBZ) – Medium grained, equigranular, dark green melagabbro, clots of coarse plagioclase, traces to 2% chalcopyrite plus minor pyrrhotite in fine clusters;

Gabbronorite Zone – Medium grained to fine grained gabbro, traces of sulphide, mainly pyrite.

Pink to buff coloured, medium- to fine-grained equigranular to porphyritic syenite is a minor intrusive phase into the IBZ gabbroic rocks in the vicinity of the mineralized zone.

Medium-grained diabase dikes and porphyritic diabase dikes, with plagioclase phenocrysts to 5 cm, intrude the East Bull Gabbro intrusion. The dikes range in width from meter scale to 10's of meters, and strike at approximately 120°. In drill core intersections (e.g. EB17-02), these dikes have aphanitic chilled margins adjacent to medium grained gabbroic rocks of the East Bull Gabbro. Regionally, Easton et al. (2011) interpret the 120° trending dikes as 2.47 to 2.45 Ga dikes of the Matachewan swarm.

The Folsom Lake deformation zone is a 120° striking, steeply-south dipping, zone of strong deformation and shearing that cuts the East Bull Gabbro intrusion in the northeast corner of the Property. A strong shear zone parallel to the Folsom deformation zone was also intersected in hole EB17-02 where both shear zone foliation and diabase dike contacts display similar 25 to

30° core angles. Quartz veins and quartz vein stockworks are a significant component of the deformation zones.

Sulphide mineralization at the East Bull Intrusion is best developed in the Inclusion-Bearing Zone, within a few tens of metres of the footwall contact. Mineralization also locally occurs disseminated throughout the Anorthosite zone and in the overlying Leucogabbrozone Zone at a distance of up to 400m stratigraphically above the margin of the intrusion (Peck et al., 2000, Wood 2001). Mineralization locally contains up to 10% sulphide, but more typically mineralization consists of 0.1 to 1.0% sulphide and rarely exceeds 2%. The sulphides consist of finely disseminated grains, and coarser blebs up to 5cm in diameter with chalcopyrite and pyrrhotite and that appear to have initially formed as primary magmatic sulphides.

Cabri (2000) completed a mineralogical study of core samples from the former Freewest Folson Property that is currently part of Pavey Ark's Property. Cabri completed reflecting light microscope studies and scanning electron microscope studies to identify the sulphide minerals. The major sulphide phases are pyrrhotite, chalcopyrite, pentlandite and pyrite. Based on energy dispersive spectra, PGM minerals were identified as: froodite (PdBi₂); kotulsite (PdTe); merenskyite (PdTe₂); michenerite (PdBiTe); unidentified Pd arsenide; sperrylite (PtAs₂); platarsite (PtAsS); and hollingsworthite (RhAsS). Gold grains were also identified. The PGM and gold occur as small inclusions ranging in size from 1 to 30 µm in size that are included in all of the major sulphide minerals.

6.0 Differential GPS Survey

The Differential GPS ("DGPS") survey was carried out under the supervision of Dr. Colin Bowdidge, P.Geo. over 4 days between October 24, 2017 and November 2, 2017 using a TopCon HiPer II differential GPS system, comprising two GPS receivers: a base station and a mobile unit ("rover"). Prior to the DGPS survey, R.H. Sutcliffe completed field work in May and June 2017 to locate and georeference Mustang and Freewest drill casings, Freewest blast trench locations, and various other reference points including pickets, drill foresights, and claim posts from the historical exploration work. This preparation work was done with a hand held Garmin Etrex GPS.

The GPS differential receivers are capable of centimetre-scale spatial resolution. The base station is mounted on a tripod, and the rover is on a staff equipped with a bubble level to allow the receiver to reflect the point on the ground being surveyed. In survey mode, both receivers take readings at 1-second intervals. The base station broadcasts corrections to the rover by a UHF radio link, enabling the rover to produce corrected locations, which are downloaded to a hand-held controller via a bluetooth link. The survey protocol is referred to as Real-Time Kinematic ("RTK") surveying.

On the East Bull project, three base station locations were necessary due to the size of the survey area, which exceeded the range of the UHF radio link. Precise positions of the base stations were established by having the base receiver take continuous autonomous readings for

between 12 and 16 hours. The readings were stored on an SD card and then uploaded to the Canadian Spatial Resolution Service (CSRS), which maintains a “Precise Point Positioning” (PPP) website at <https://webapp.geod.nrcan.gc.ca/geod/tools-outils/ppp.php> for correction. CSRS is a federal government service which maintains a network of GPS base stations across the country, in collaboration with the provinces. These enable corrections to be made to each individual reading; after averaging the corrected readings, an absolute position is downloaded to the user, accompanied by information on the estimated accuracy of the data (usually within a few centimetres). The three base station locations were marked by an “X” chiselled in the rock surface.

Because internet service was not available at the camp, temporary base station locations were determined by having each base station take a single autonomous reading. Mobile readings were corrected against these temporary base station locations. After field work was complete and fully corrected base station locations were received from CSRS, the mobile readings were adjusted by the difference between the temporary and final corrected base station locations.

Mobile locations were determined using 10 consecutive readings. In locations where the UHF signal was strong, this was accomplished in 10 seconds. A weak UHF signal might take up to a minute to register 10 corrections from the base station. In only one location, drill hole ME99-20, communication with the base station was not established, due to the base station battery having expired. Since this was the last location to be surveyed, the rover was used to take 300 consecutive, autonomous readings on an SD card, which were then submitted to CSRS for correction in the same way as base station data.

The DGPS survey was used to precisely locate the 6 channels sampled by Pavey Ark, 4 located Freewest casings, 9 of 10 located Mustang casings, and the Freewest grid origin claim post. A table of surveyed locations of drill casings is provided in Appendix I. A map of the surveyed locations is provided as Map 2.

7.0 Channel Sampling

Mr. Greg Smith of A-Star Prospecting of Thunder Bay completed 77 meters of channel sampling for Pavey Ark on claim 4272475 during the periods July 8 to 10, 2017 and October 26 to 28, 2017. The work was supervised by R.H. Sutcliffe, P.Geo. and prior to the channel sampling Sutcliffe completed field work in June to mark out and georeference the proposed channel locations. The channels replicate 6 blast trenches sampled by Freewest in 1999/2000 on the former Freewest Folsom Property lines 3+50W, 4+70W, 6+40W, 7+40W, 13+50W and 14+00W (Garden Zone). The channels were cut using a diamond blade saw and samples were nominally approximately 3 cm wide, 5 cm deep and 1.0 m in length. A total of 79 channel samples plus an additional 6 blanks and 6 standards were submitted for assay.

The channels were surveyed by DGPS and locations are shown on Map 2. The channelling was limited by available outcrop exposure, however, all of the channels were successful in defining surface mineralization. The channels were all oriented approximately north-south and crossed

the strike of mineralization. Most of the channels were cut in the Inclusion Bearing Zone. Channel 13+50W cuts anorthositic gabbro at the north end of the channel and ends in the Inclusion Bearing Zone at the south end.

Two of the channels terminated in mineralization at both ends of the channel, and three of the channels terminated in mineralization at one end of the channel indicating that the mineralization is wider than the channel sample. The strongest results for PGMs and Cu were obtained from 4+70W to 7+40 W over a strike length of 270 m. The weaker mineralized zone at 13+50 W is probably located north of the main mineralized zone.

The location of the channel samples is shown in Figure 5. Complete channel sample assay results are tabulated in Appendix 2. Detailed plans of the channels from the DGPS survey are shown on Map 3. Table 2 summarizes the results for each of the 6 channels.

Figure 5. Location of 2017 channel samples

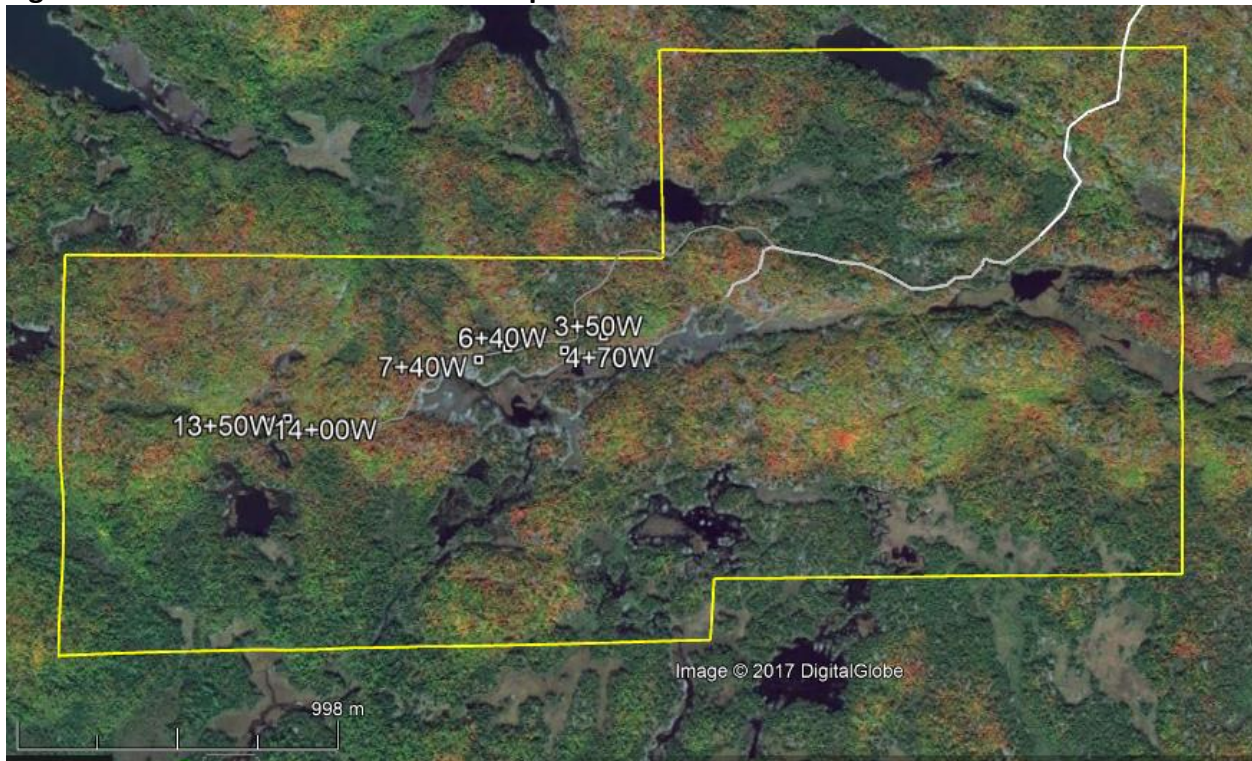


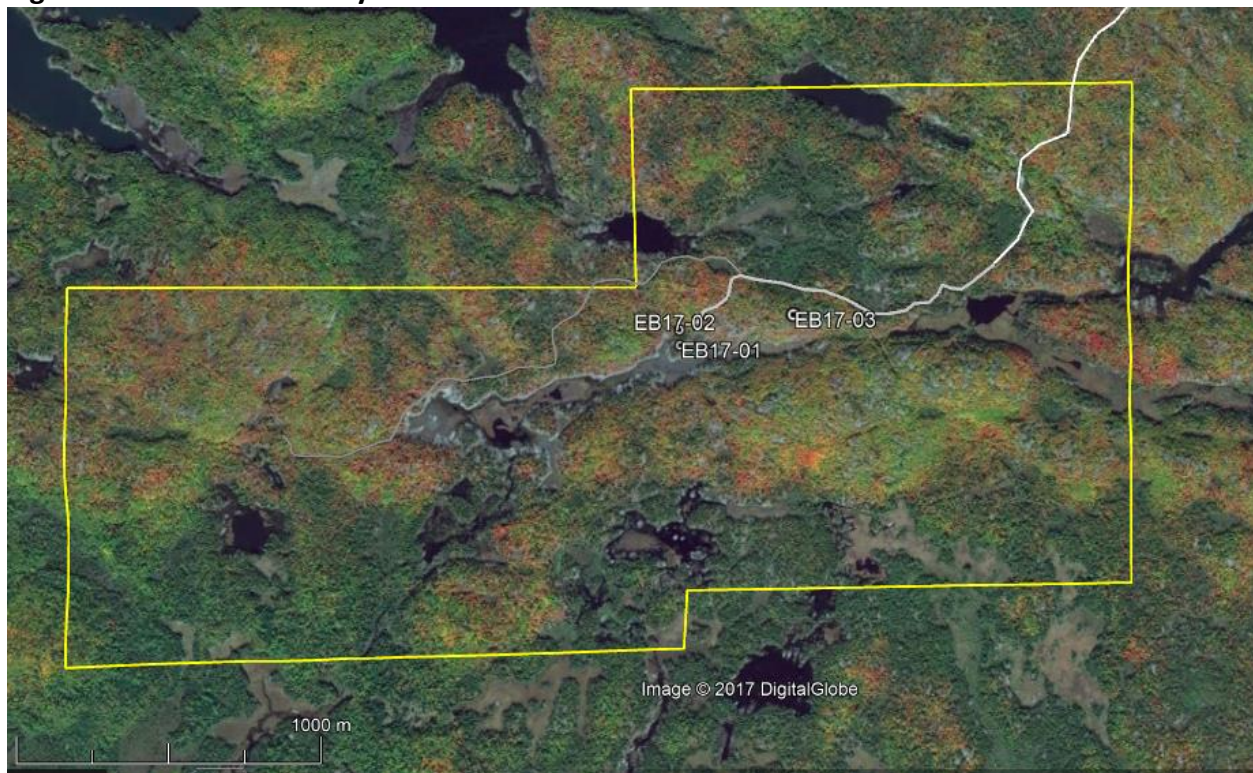
Table 2. Summary of 2017 Channel Sample Results

Channel	Channel length (m)	Mineralized Interval (m)	Au ppb	Pd ppb	Pt ppb	Cu ppm	Ni ppm	Co ppm	PGM+ Au ppb	Comment
3+50W	14.78	14.78	69	587	208	1,569	688	83	864	Open to N & S
4+70W	12.00	11.10	120	833	419	1,868	753	79	1,372	Open to N
6+40W	5.0	5.0	58	962	262	1,952	1073	77	1,282	Open to N & S
7+40W	10.05	9.05	60	1,159	335	1,632	756	79	1,554	Open to N
13+50W	17.0	5.76	40	421	165	935	331	79	625	Weak zone above main zone
14+00W	17.96	6.96	43	922	308	1,115	403	54	1,272	Open to S

8.0 Diamond Drilling

EDCOR Drilling Services Inc. of Toronto completed 3 BQTK diamond holes for a total of 320 m between October 29 and November 9, 2017 with a D1 Multi-power diamond drill. Holes EB17-01 and EB17-03 twinned Mustang holes ME00-19 and ME99-16 respectively. Hole EB17-02 was an in-fill hole drilled below EB17-01. The holes were drilled toward the south at an inclination of -45° and intersections represent approximate true widths. Down hole surveys were conducted using a Devi-shot tool. Casings were left in the holes and the core is stored at East Bull Lodge.

Figure 6. Location of Pavey Ark holes drilled in 2017



The core was logged, sawn and sampled at the East Bull Lodge under the supervision of R.H. Sutcliffe, P.Geo. and Craig Maitland of Clark Exploration, Thunder Bay. R.H. Sutcliffe, logged the core and marked out the sample intervals for assay. Mr.Maitland assigned an identification number to each assay sample using uniquely numbered sample tags. Two of the three tags were marked with the date, project, drill hole number, depth from, depth to, and sample interval. The third tag was left blank for inclusion in the sample bag.

Once marked, Mr. Maitland cut the core for each sample interval using a gas powered saw with a diamond-impregnated saw blade. One half of the core sample was placed into a plastic bag into which the blank sample tag was placed. The remaining 1/2 core was put back into the core box. One of the marked sample tags was placed at the start of the sample interval and stapled to the wooden box. The plastic bag with the sample and unmarked tag was rolled up and taped shut with sturdy packing tape, and marked with the sample tag number.

A total of 92 samples of sawn ½ core with a nominal length of 1.0 m plus an additional 4 blanks and 4 standards for QA/QC purposes were submitted for assay.

Two Mustang holes were selected for twinning since none of the core from the Mustang 1999/2000 drill program on claim 1227910 was available. Investigations in 2017 by R.H. Sutcliffe concluded that the Mustang core had been kept at a rented storage site in Sudbury and was disposed in 2008. Pavey Ark has copies of the Mustang drill logs and copies of the assay certificates for all of the Mustang drill holes. This information was previously filed for assessment by Mustang.

A summary of significant intersections is presented in Table 3. Drill hole logs and assay results are presented in Appendix 3.

Hole EB17-01 was drilled at an azimuth of 180° with an inclination of -45° to twin Mustang hole ME00-19 that intersected 12.0 m at 2.51 g/t Pd+Pd+Au+Rh from 29.0 m to 41.0 m. Hole EB17-01 very successfully twinned and improved on the results of the Mustang intersection with EB17-01 returning strong PGM mineralization grading 2.82 g/t Pd+Pt+Au over the same 12.0 m interval. Hole EB17-01 returned the highest 1.0 m assay interval of the program with the 1.0 m from 36.0 to 37.0 intersecting 8.09 g/t Pd, 1.82 g/t Pt for a total 9.98 g/t Pd+Pt+Au plus 0.37% Cu and 0.29% Ni. Note that the Pavey Ark results do not include Rh which was included in the total PGM's by Mustang.

Hole EB17-02 was an in-fill hole drilled at 180° with an inclination of -45° that was designed to test the down-dip extension of mineralization in EB17-01/ME00-19. EB17-02 intersected a weak zone of mineralization from 86.0 to 92.0 m, however, the main target was impacted by the intersection of a strong shear zone and parallel Matachewan diabase dikes in the upper part of the drill hole. Shear fabrics and contacts exhibit 25 to 30° angles to the core axis that are consistent with an interpreted 120° strike and steep south dip. This shear structure and dikes appear to have dislocated the mineralized zone and may have resulted in an apparent

displacement of the mineralized zone near the western boundary of the former Mustang property.

Hole EB17-03 was drilled at an azimuth of 180° with an inclination of -45° to twin Mustang hole ME99-16 that intersected 25.0 m at 1.03 g/t Pd+Pt+Au+Rh from 58.0 to 83.0 m. This broad intersection contained two stronger zones from 58.0 to 69.0 m and 80.0 to 83.0 m grading 1.51 g/t and 3.83 g/t Pd+Pt+Au+Rh respectively. Pavey Ark's hole EB17-03 very successfully twinned the Mustang hole and again improved on both of the Mustang intervals. In EB17-03 the upper intersection from 60.0 to 71.0 graded 1.73 g/t Pd+Pt+Au and the lower interval from 80.0 to 87.0 m graded 3.14 g/t Pd+Pt+Au.

Table 3. Summary of Significant 2017 Drill Intersections

DDH	From (m)	To (m)	Width (m)	Au ppb	Pd ppb	Pt ppb	Ag ppm	Cu ppm	Ni ppm	Co ppm	PGM+ Au ppb
EB17-01	29.0	41.0	12.0	71	2,082	665	0.91	2,258	1,344	92	2,818
Incl.	36.0	37.0	1.0	75	8,090	1,820	1.70	3,660	2,940	168	9,985
EB17-02	86.0	92.0	6.0	37	644	242	0.78	1,690	1,008	88	923
EB17-03	60.0	71.0	11.0	78	1,148	501	0.51	1,403	576	116	1,727
and	80.0	87.0	7.0	111	2,243	788	0.34	1,578	705	89	3,142
Intersections are approximate true widths.											

The 60 samples of core that were measured for specific gravity from holes EB17-01,02,03 had a range of 2.80 to 3.14 gm/cm³ and an average specific gravity of 2.97 gm/cm³. There was no discernable difference between mineralized and host rock gabbros. Results are listed on certificate A17-13086 (Appendix 6).

In addition to the sampling by Pavey Ark, Mr. Antoine Yassa, P.Geol. of P&E Mining Consultants Inc. of Brampton, Ontario, independently selected and sampled an additional 6 duplicate samples of ¼ core from hole EB17-01. Results are discussed in section 10.

9.0 Freewest Core Re-sampling and Assay

A total of 241 Freewest assay intervals from 8 Freewest holes drilled in 1999-2000 on present claim 4272475 were re-sampled during the current program to validate the historical work by Freewest. Seven (7) holes for a total of 217 intervals were re-sampled by Pavey Ark and assayed at ActLabs, Ancaster. An additional 24 intervals from one hole (321-00-21) were independently sampled by Mr. Antoine Yassa, P.Geol. of P&E Mining consultants and analyzed at ALS Laboratories, Rouyn-Noranda.

The Freewest drill core (27 holes for a total of 2,902 m) had been stored outdoors at the East Bull Lodge since the 1999/2000 drill program. R.H. Sutcliffe reviewed the condition of the core in May 2017. The boxes were in several outdoor racks of which two had collapsed, the boxes were not in order and approximately 20% of the boxes were missing box labels. Despite the

modest condition of the core, a high proportion of the assay tags were still legible. Craig Maitland and Des O'Connor of Clark Exploration, Thunder Bay spent approximately 14 days at the East Bull Lodge in June recovering, reorganizing, and cataloguing the core. At the end of this work approximately 92% of the Freewest core boxes had been catalogued including 4 complete 321-99 series holes and 4 complete 321-00 series holes. (Note all of the Freewest holes are identified by the prefix 321- and this prefix is sometimes omitted in the accompanying text and tables.)

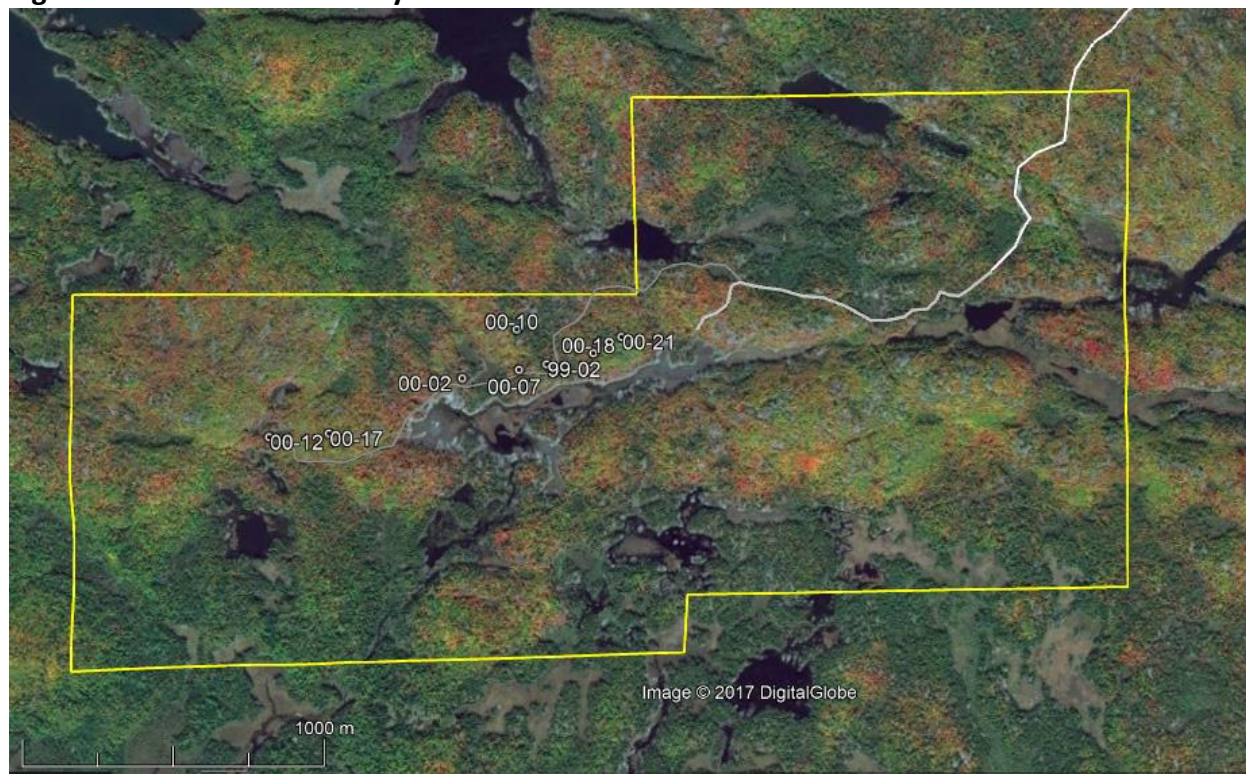
Freewest only submitted the 1999 drill logs and assay certificates for assessment and consequently at the start of the program only the 1999 data was available. Recovery of the data for the 2000 program proved to be challenging since Freewest was acquired by Cliffs Natural Resources Inc. ("Cliffs") in 2009. Subsequently Cliffs sold its Canadian assets to Noront Resources Ltd. ("Noront"). In August 2017, R.H. Sutcliffe located copies of the Freewest logs and assay certificates for all of the Freewest drill holes.

Based on the complete set of the Freewest drilling records, R.H. Sutcliffe selected mineralized intervals in 8 Freewest drill holes for re-sampling (Table 4). The selection of holes was based on: i) obtaining a distribution of mineralization intervals over the strike length of the property; and ii) the ability to sample complete or near complete mineralization intervals; and iii) have a high confidence of duplicating the original Freewest assay sample intervals.

Table 4. Summary of re-sampled mineralized intervals in Freewest drill holes

DDH	UTM mE	UTM mN	Az	Incl	From (m)	To (m)	Width (m)	Samples	Comments
99-02	404788	5141451	180	-60	6.7	43.6	36.9	35	Missing 18.8-20.4 m & 24.9-28.5 m
00-02	404508	5141414	188	-47	40.0	56.0	16.0	16	Complete
00-07	404697	5141439	182	-45	3.0	43.0	40.0	36	Missing 27.0-31.0 m
00-10	404691	5141567	180	-55	100.0	151.0	51.0	47	Missing 139.0-144 m
00-12	403868	5141226	180	-45	14.3	31.0	16.7	11	Missing 22.0-28.0 m
00-17	404070	5141235	180	-45	42.0	80.0	38.0	39	Complete
00-18	404943	5141485	180	-45	28.0	62.0	34.0	33	Complete
00-21	405036	5141537	180	-45	63.0	87.0	24.0	24	Complete
								241	
<i>Intervals are approximate true widths</i>									

Figure 7. Location of Re-Assayed Freewest drill holes



Source: Google Earth 2017

R.H. Sutcliffe, P.Geo. (Pavey Ark) and Mr. Craig Maitland (Core technician, Clark Exploration) completed the core resampling program at the East Bull Lodge between October 25 to November 10, 2017. Mr. Antoine Yassa, P.Geo, P&E, was present on October 31 and November 1, 2017 for requirements of the NI 43-101 independent sampling. Mr. Craig Maitland managed the retrieval of core boxes and sample cutting. R.H. Sutcliffe, reviewed the Freewest core, confirmed that the Freewest sample intervals were valid, that historical sample tags were present, that the split core was intact, and marked out the sample intervals for re-assay. Maitland assigned an identification number to each re-assay sample using uniquely numbered sample tags. Two of the three tags were marked with the date, project, drill hole number, depth from, depth to, and sample interval. The third tag was left blank for inclusion in the sample bag.

Once marked, Mr. Maitland cut the split core for each sample interval using a gas powered saw with a diamond-impregnated saw blade. One half of the resulting $\frac{1}{4}$ core sample was placed into a plastic bag into which the blank sample tag was placed. The remaining $\frac{1}{4}$ core was put back into the core box. One of the marked sample tags was placed at the start of the sample interval and stapled to the wooden box. The plastic bag with the sample and unmarked tag was rolled up and taped shut with sturdy packing tape, and marked with the sample tag number.

Pavey Ark submitted a total of 217 re-assay samples of $\frac{1}{4}$ core plus 11 certified reference standards and 10 blanks. Pavey Ark's samples were analyzed by Actlabs in Ancaster, Ontario.

Pavey Ark's samples were transported under the direct supervision of R.H. Sutcliffe to the facilities of Actlabs in Ancaster, Ontario. The additional 24 intervals from 321-00-21 were independently sampled by Antoine Yassa P.Geo of P&E Mining consultants and were taken directly by Mr. Yassa for analysis at ALS Laboratories, Rouyn-Noranda. Figures 8 to 11 show comparison of historical Freewest results with Pavey Ark and P&E's independent results for Freewest holes 00-18 and 00-21 respectively.

Figure 8. Comparison of Freewest and Pavey Ark Pd assays for DDH 00-18

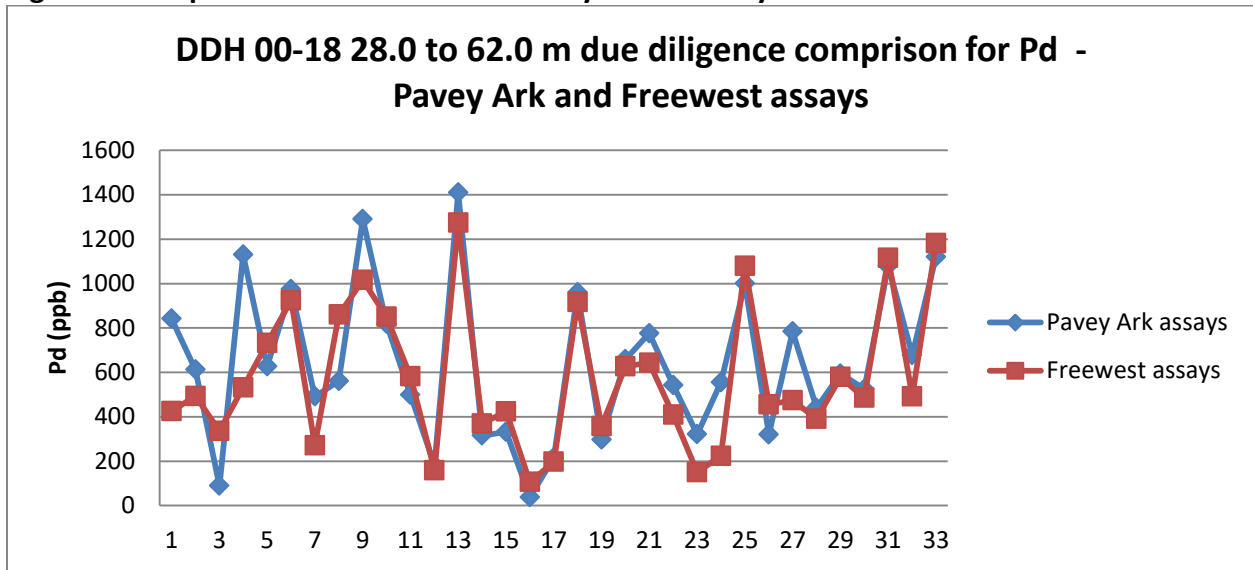


Figure 9. Comparison of Freewest and Pavey Ark Pt assays for DDH 00-18

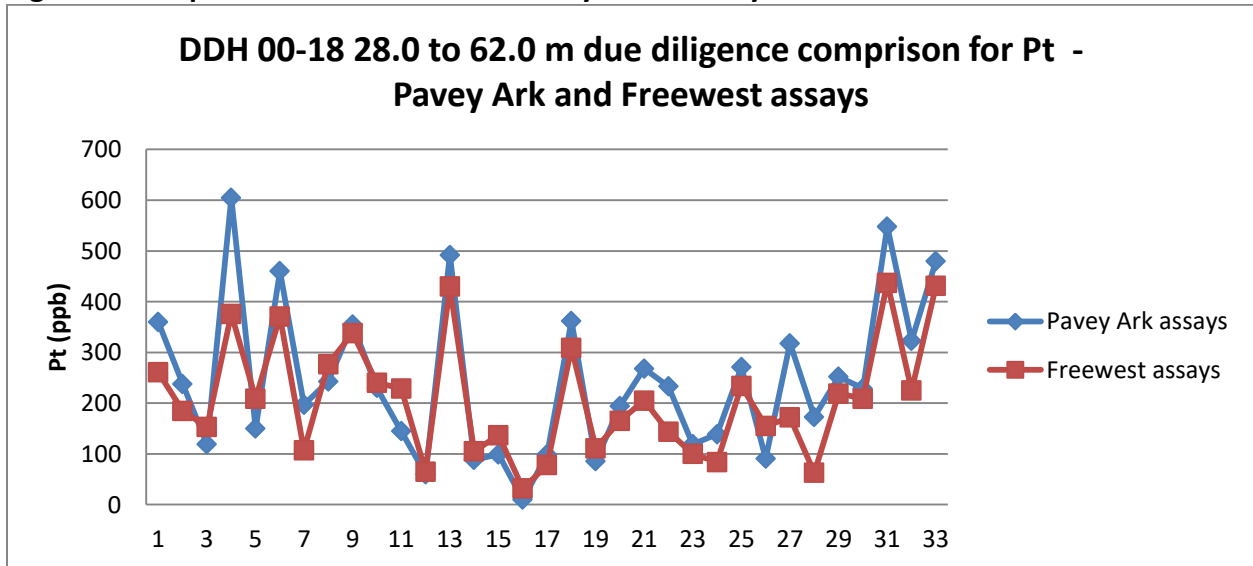


Figure 10. Comparison of Freewest and P&E assays Pd assays for DDH 00-21

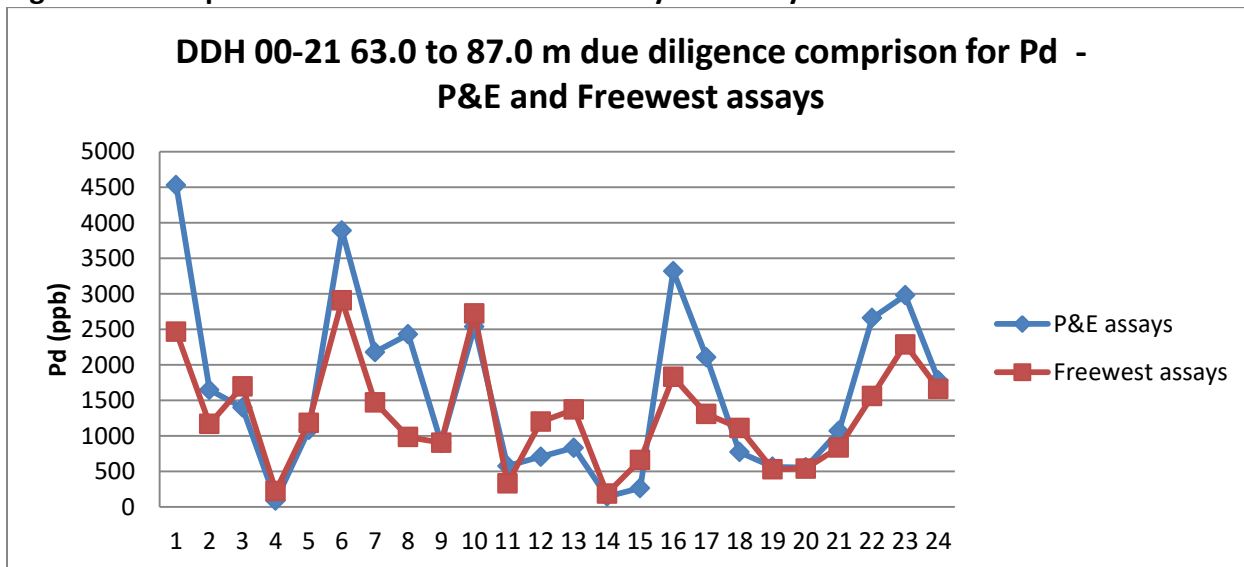
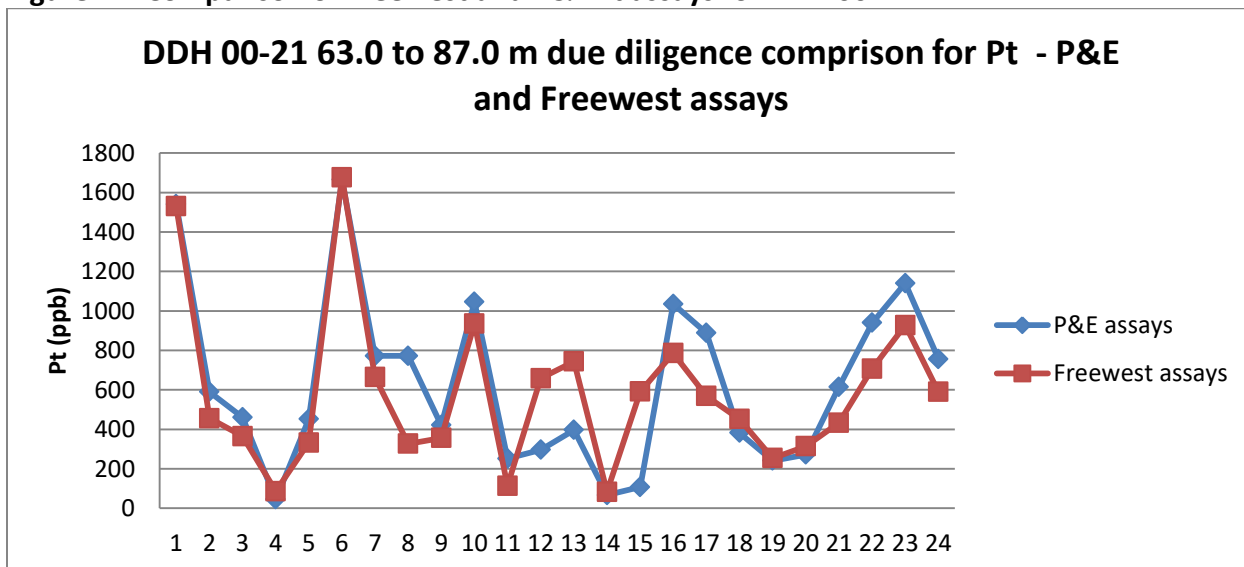


Figure 11. Comparison of Freewest and P&E Pt assays for DDH 00-21



The results of 241 Freewest drill core intervals re-assayed by Pavey Ark resulted in an improvement of overall grade for Au, Pd, Pt, Cu and Ni with good reproducibility. The complete results are presented in Appendix 4. On average, the grade improvement for Au, Pd, Pt, Cu, Ni respectively is 2.8%, 9.3%, 8.1%, 4.1%, and 28.4%. The significant improvement in Ni is probably due to improved sample dissolution using a 4-acid digestion.

10.0 Analysis Methods and Sample QA/QC

The Pavey Ark samples were analyzed for Pt, Pd, Au by 50 g fire assay with ICP-OES finish and for Ag, Co, Cu, Ni by total digestion with an ICP finish at Actlabs, in Ancaster, ON. Actlabs also determined the specific gravity of 60 samples of sawn ½ core from holes EB17-01, 02 and 03.

Actlabs has developed and implemented a Quality Management System (QMS) designed to ensure the production of consistently reliable data at each of its locations including the Ancaster laboratories. The system covers all laboratory activities and takes into consideration the requirements of ISO standards. Actlabs maintains ISO registrations and accreditations. ISO registration and accreditation provide independent verification that a QMS is in operation at the location in question.

Mr. Yassa, P.Geol, of P&E Mining Consultants Inc. visited the East Bull Lodge core facility and the East Bull PGM Property on October 31 and November 1, 2017 for the purpose of reviewing and independently sampling drill core from the East Bull PGM Property. Six samples were independently selected by Mr. Yassa from hole EB17-01 and were analyzed for Pt, Pd, Au by a 50 g fire assay with ICP-AES finish, for Rh by 30 g fire assay with ICP-MS finish, and for Ag, Co, Cu, Ni by 4-acid digestion with ICP-AES finish at ALS Canada Ltd.'s laboratory in Rouyn-Noranda, QC. The results are shown in Figures 12 and 13 for Pd and Pt respectively and show excellent reproduceability.

Figure 12. DDH EB17-01 due diligence comparison for Pd

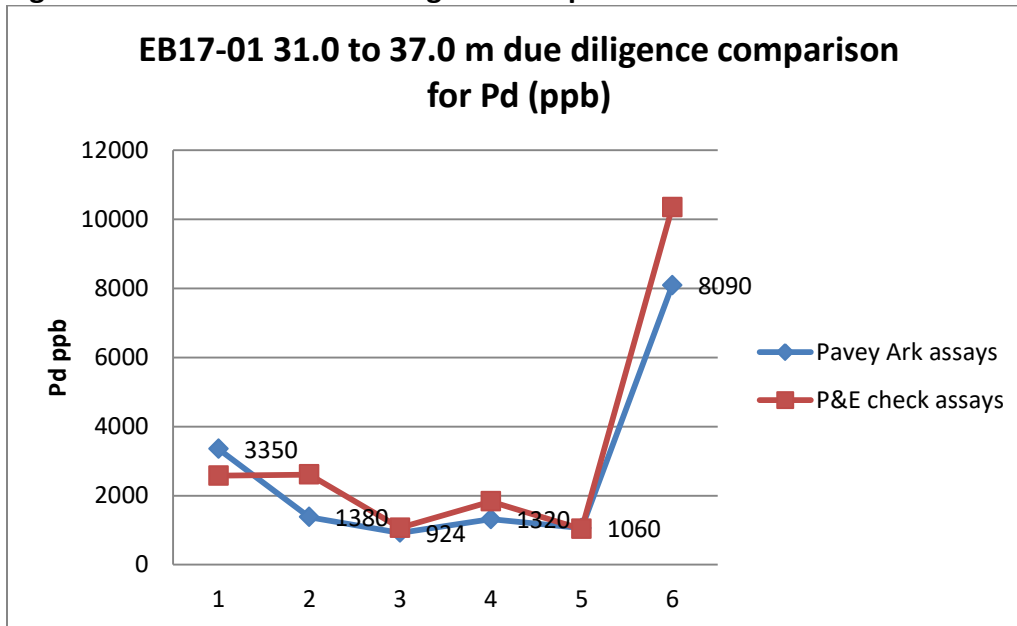
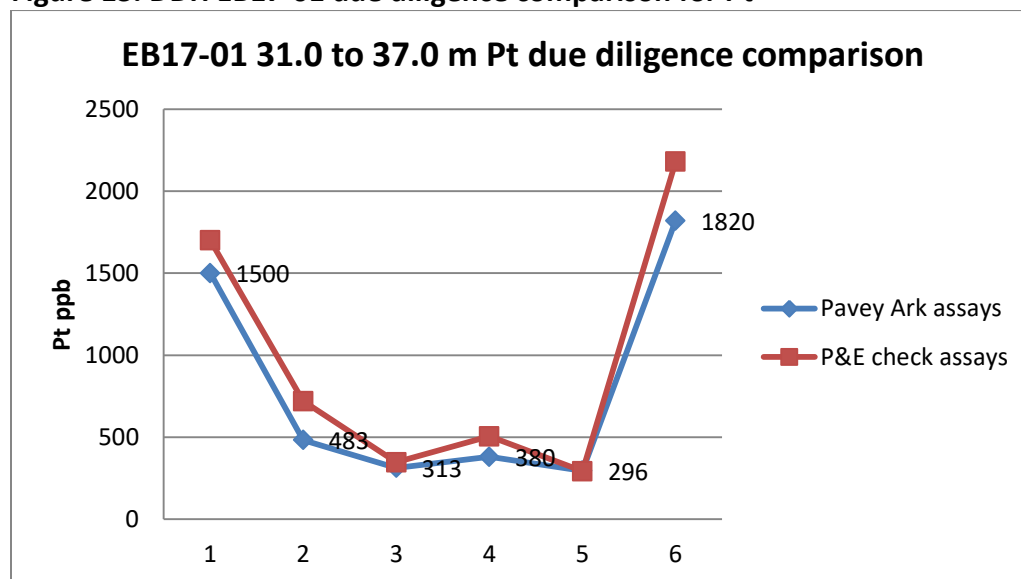


Figure 13. DDH EB17-01 due diligence comparison for Pt



Pavey Ark inserted reference standards and field blanks into the assay samples at a rate of approximately 1 standard and 1 blank per 20 analyses. The CDN Resource Laboratories Ltd. CDN-ME-1310 Certified Reference Standard was the primary reference standard used. This standard is an altered peridotite from the Wellgreen Complex with similar PGM grades to the East Bull gabbro. ME-1310 is a certified standard for Pd, Pt, Co, Cu, Ni. The ME-1310 value for gold is provisional and silver is indicated. The Ontario Geological Survey LDI-1 reference standard from the Lac des Iles PGM deposit was used as a secondary standard, however, this is considered a provisional standard for all of the elements tabulated. Table 4 provides the recommended values for the CRMs. Complete QA/QC assay results for the program are presented in Appendix 5.

Table 4. Recommended CRM Values +/- 2σ

CRM	Au (ppb)	Pd (ppb)	Pt (ppb)	Ag (ppm)	Co (ppm)	Cu(ppm)	Ni (ppm)
ME-1310	63+/-16	563+/-40	433+/-38	1.0	190+/-20	2760+/-220	3790+/-220
LDI-1	84+/-22	834+/-54	98+/-22		52+/-4	413+/-24	656+/-28

ME-1310 is certified for Pd, Pt, Co, Cu, Ni. ME-1310 Au values are provisional. LDI-1 values are provisional.

Figures 14 to 17 summarize the performance of Pavey Ark's analyses for CDN-ME-1310 and LDI-1. Several analysis of the CDN-ME-1310 reference standard are above 2SD limits of the certified values for both Pd (563+/-40 ppb) and Pt (433+/-38 ppb), with one result being significantly outside the 2SD limits. The average results obtained for Pd (595.8 ppb) and Pt (452.8 ppb) on ME-1310 are within 2SD. This indicates that the Actlabs results are acceptable for the program.

Figure 14. Results for Pd analysis of ME-1310 reference material

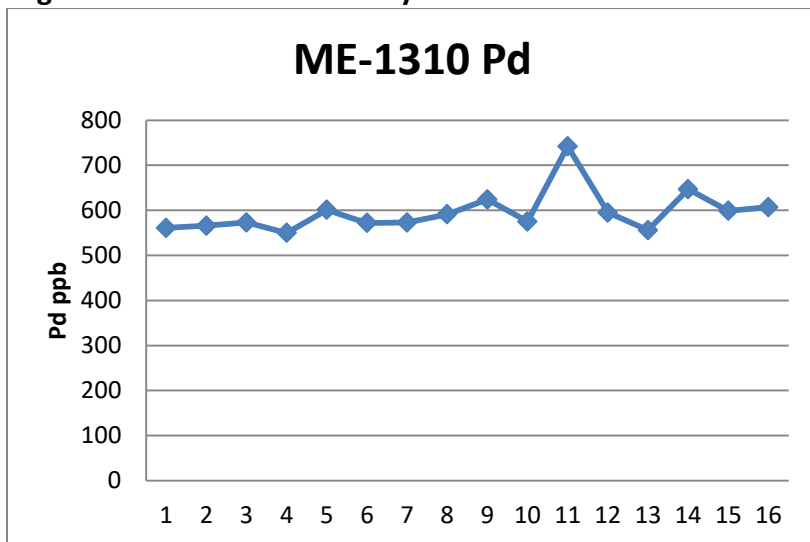


Figure 15. Results for Pt analysis of ME-1310 reference material

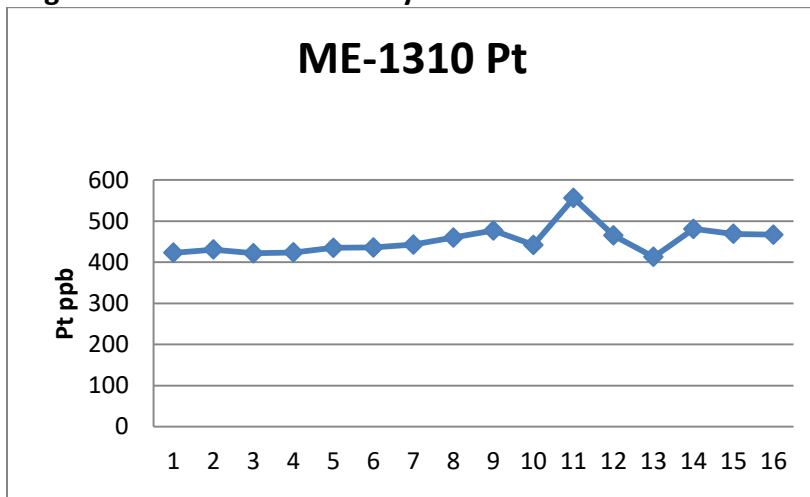


Figure 16. Results for Pd analysis of LDI-1 reference material

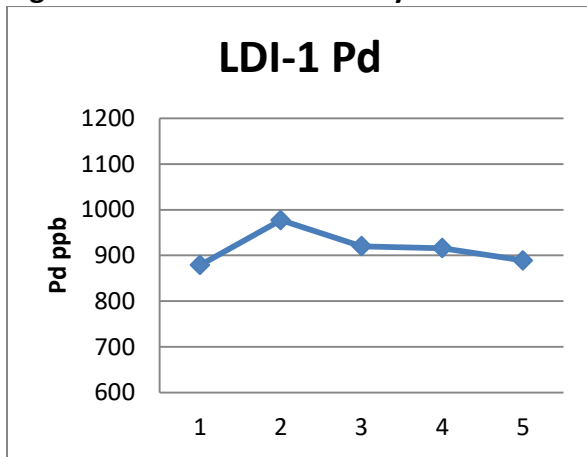
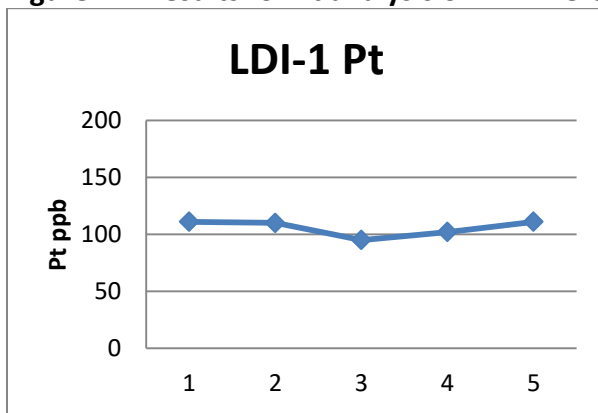
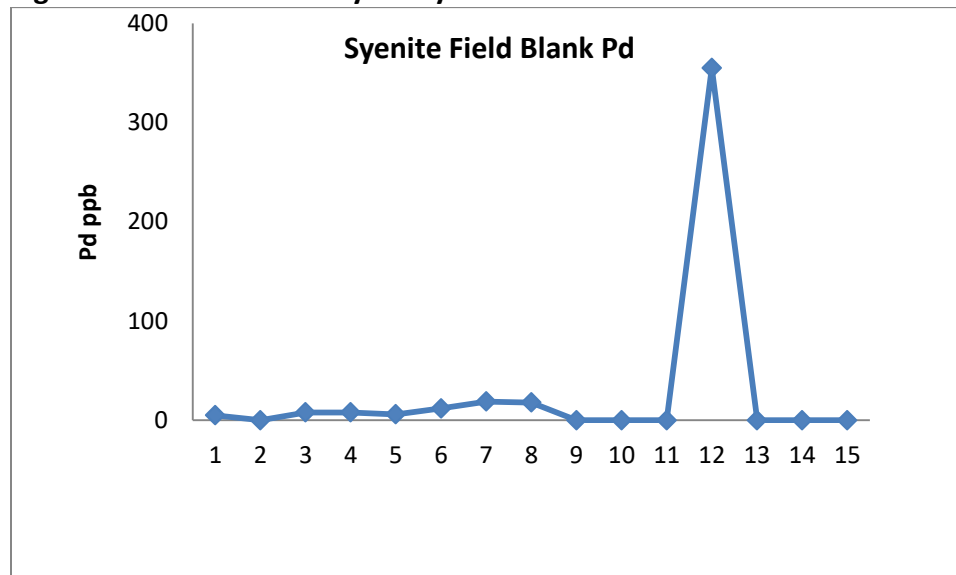


Figure 17. Results for Pt analysis of LDI-1 reference material



For field blanks for the core re-assay and drilling program Pavey Ark used syenite from drill core in Freewest hole 00-06. Results for the syenite field blank are shown in Figure 18. In general the syenite proved to be an acceptable blank, however, from 15 syenite field blank assays there was one significant failure with elevated Pd, Pt, Au but low levels of Cu and Ni. The cause of this failure is being investigated. Other than the one failure, there is no significant evidence of laboratory contamination and the results are considered acceptable for the current requirements. For channel sample field blanks Pavey Ark used channel samples of an orthositic gabbro from the hanging wall of the deposit.

Figure 18. Results of assays of syenite field blanks



11.0 Conclusions and Recommendations

The surface channel sampling, diamond drilling and core re-assay program was successful in confirming and augmenting the significant PGM and base metal values determined by Freewest and Mustang in 1999 and 2000. The program has validated the historical assays as being acceptable for use in a NI43-101 resource estimate and has provided a QA/QC program with certified reference materials, duplicates and blanks. Based on the validation work and QA/QC program, Pavey Ark will be proceeding with utilizing the Mustang and Freewest assay database combined with the Pavey Ark results for a NI43-101 resource estimate. Pavey Ark will also submit mineralized samples for Rh analysis.

12.0 Acknowledgements

Richard Sutcliffe would like to acknowledge the thoughtful, hard-working and capable efforts of Craig Maitland, Greg Smith, Colin Bowdidge, Des O'Connor, Julien Villeneuve and Phillippe Fortin on the East Bull Project. These gentlemen were all a pleasure to work with in the field and the opportunity to work with them on the next project is welcomed.

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14.0 Statement of Qualifications

I, Richard H. Sutcliffe, of 100 Broadleaf Crescent, Ancaster, Ontario, do hereby certify that:

I am a graduate of University of Toronto (B.Sc. Geology, 1977, M.Sc Geology 1980), and a graduate of University of Western Ontario (Ph.D. Geology, 1986) and I have been practising my profession as a geologist since.

I am a member with the Association of Professional Geoscientists of Ontario (#852).

I have direct knowledge of the exploration work performed for this assessment and I am indirectly the owner of the claims on which the work was performed.

Signed

“R.H. Sutcliffe”

Richard H. Sutcliffe, Ph.D., P.Geo.

December 31, 2017

Ancaster, Ontario

Appendix 1. DGPS Survey results

EAST BULL DGPS SURVEY - DRILL HOLE COLLAR COORDINATES AND ESTIMATED AZIMUTHS									
Drill hole Number	UTM NAD83 Zone 17north			Waypoint Number	Azimuth (UTM)	Azimuth (Astro.)	Az astro from log	Difference (DGPS- log)	Notes on azimuth estimation
	Easting	Northing	Elevation						
00-01	404790.610	5141492.060	374.085	160					Collar
00-01	404790.736	5141493.092	374.053	161	187.0°	187.9°	185.0°	2.9°	Casing and extension pipe
	404789.011	5141477.234	376.523	162	186.2°	187.1°	185.0°	2.1°	Front sight picket (base) - 16 metre separation
00-02	404507.478	5141413.465	364.081	40					Collar
	404507.660	5141414.966	363.892	41	186.9°	187.8°	188.0°	-0.2°	Casing and extension pipe
00-07	404698.315	5141435.819	360.927	42					Collar
	404698.357	5141437.460	360.877	43	181.5°	182.4°	182.0°	0.4°	Casing and extension pipe
00-17	404069.546	5141238.074	369.861	3					Collar
	404069.465	5141239.397	369.842	4	176.5°	177.4°	180.0°	-2.6°	Casing and extension pipe
ME99-12 (-45°)	405831.228	5141605.634	358.093	314					Collar
ME99-12 (-45°)	405831.228	5141606.209	358.032	315	180.0°	180.9°			Casing only
ME99-12 (-45°)	405830.699	5141657.463	359.751	316	179.4°	180.3°			Azimuth of picket line
ME99-13 (-90°)	405831.180	5141606.962	358.153	313					Vertical hole
ME99-15	405417.582	5141555.247	382.426	302					Casing too short to measure azimuth
ME99-16	405608.066	5141577.937	381.086	303					Casing too short to measure azimuth
ME99-17(-45°)	405584.510	5141513.930	367.063	306					Collar
ME99-17(-45°)	405584.520	5141514.694	367.121	307	180.7°	181.6°			Casing only
ME99-18 (-90°)	405584.484	5141516.189	367.387	304					Vertical hole
ME99-19	405231.291	5141481.840	356.764	319					Casing too short to measure azimuth
ME99-20	405304.514	5141558.717	364.279	318					Autonomous reading 335 points
ME99-22	405739.932	5141640.977	360.819	317					Measured from 17-01
EB17-01	405231.238	5141482.230	356.764	309					Collar
EB17-01	405231.174	5141484.959	357.407	310	178.7°	179.6°			Casing and extension pipe
EB17-02	405230.859	5141538.673	359.674	311	179.6°	180.5°			Assumes hole was oriented towards 17-01

Appendix 2. Channel Sample Results

Channel ID	Sample ID	From (m)	To (m)	L (m)	Au ppb	Pd ppb	Pt ppb	Ag ppm	Co ppm	Cu ppm	Ni ppm	Comments	
EB17 - CH 3+50W 404906.1mE 5141444.4mN Azimuth 208 Sampled July 10, 2017 Certificate A17-07189	494001	0.00	0.92	0.92	36	903	284	0.4	115	1090	794	Gabbro, mg, sheared, 1.0% blebby cpy	
	494002	0.92	2.05	1.13	47	624	184	0.6	78	1410	615	Gabbro, mg, 0.5% diss cpy	
	494003	2.05	3.05	1.00	47	372	348	0.4	63	1130	550	Gabbro, mg to cg, 1.0% to 2.0% blebby cpy	
	494004	3.05	4.40	1.35	76	596	148	0.6	100	1730	798	Gabbro, mg to cg, 0.5% to 1.0% blebby cpy	
	494005	4.40	5.30	0.90	227	904	233	1.3	109	3370	783	Leucogabbro, mg to cg, 0.5% blebby cpy	
	494006	5.30	6.50	1.20	26	412	140	0.4	78	1240	581	Gabbro, mg to cg, 0.5% to 1.0% blebby cpy	
	494007	6.50	7.55	1.05	58	788	256	0.6	102	1500	871	Gabbro, mg to cg, 1.0% blebby cpy	
	494008	7.55	8.40	0.85	71	596	172	0.6	98	1420	776	Gabbro, cg, 1.0% blebby cpy	
	494009	8.40	9.20	0.80	28	525	154	0.3	72	974	555	Gabbro, mg, tr cpy	
	494010	9.20	10.10	0.90	51	450	200	0.5	78	1500	656	Gabbro, mg, 0.5% diss cpy	
	494011	10.10	10.90	0.80	85	608	197	0.9	71	2110	748	Gabbro, cg, 0.5% blebby cpy	
	494012	10.90	11.65	0.75	66	432	282	< 0.3	71	876	545	Gabbro, cg to peg, 0.5% blebby cpy	
	494013	11.65	12.45	0.80	71	460	180	0.5	70	1510	669	Gabbro, cg, tr cpy	
	494014	12.45	13.18	0.73	93	474	145	0.8	52	1760	429	Gabbro, cg, 1.0% blebby cpy to 1.5 cm	
	494015	13.18	13.93	0.75	94	737	259	0.9	71	2390	942	Gabbro, cg, 0.5% diss cpy	
	494016	13.93	14.78	0.85	56	496	166	0.5	75	1250	640	Gabbro, cg, 0.5% diss cpy	
	494017		Standard			75	742	556	0.8	198	2790	3820	CDN ME 1310
	494018		Field Blank			< 2	20	18	< 0.3	52	100	84	Gabbro, mg
EB17 - CH 4+70W 404779.8mE 5141403.1mN Azimuth 150 Sampled July 10, 2017 Certificate A17-07189	494019	0.00	0.75	0.75	37	609	369	< 0.3	67	511	390	Gabbro, mg to cg, 0.5% blebby cpy	
	494020	0.75	1.75	1.00	117	1140	600	0.7	71	1610	590	Gabbro, cg, 0.5% to 1.0% blebby cpy	
	494021	1.75	2.95	1.20	240	2400	1190	1.4	69	2040	767	Gabbro, cg, 0.5% blebby cpy	
	494022	2.95	3.95	1.00	95	457	179	0.7	79	2390	1020	Gabbro, cg, 1.0% blebby cpy	
	494023	3.95	5.00	1.05	147	550	254	1	99	2810	1160	Gabbro, mg to cg, 1.0% to 1.5% blebby and diss cpy	
	494024	5.00	6.05	1.05	72	305	87	0.7	79	1910	894	Gabbro, mg, 1.0% to 1.5% blebby and diss cpy	
	494025	6.05	7.05	1.00	109	546	175	0.8	86	2460	842	Gabbro, mg, 1.0% blebby cpy	
	494026	7.05	8.10	1.05	123	773	476	0.5	91	1460	716	Gabbro, mg, 0.5% diss cpy	
	494027	8.10	9.10	1.00	51	387	220	< 0.3	73	743	417	Gabbro, mg, 0.5% diss cpy	

	494028	9.10	10.10	1.00	216	1310	740	1.4	90	3270	925	Gabbro, mg, 0.5% diss cpy
	494029	10.10	11.10	1.00	64	361	175	< 0.3	66	936	441	Gabbro, mg, tr cpy
	494030	11.10	12.00	0.90	19	77	33	< 0.3	48	515	321	Gabbro, mg
	494031	Field Blank			< 2	16	14	< 0.3	49	116	66	Gabbro, mg
	494032	Standard			74	595	465	0.7	196	2780	3750	CDN ME 1310
EB17 - CH 7+40W	494033	0.00	1.00	1.00	112	1920	451	1.3	83	2570	707	Gabbro, mg, tr to 0.5% fine diss cpy
404515.2mE												
5141369.9mN	494034	1.00	1.65	0.65	12	59	44	< 0.3	73	593	83	Gabbro, mg to cg, tr to 1.0% diss cpy
Azimuth 178	494035	1.65	3.00	1.35	71	714	189	1	99	2050	1070	Gabbro, mg, tr cpy
Sampled July 10, 2017	494036	3.00	4.00	1.00	50	1020	439	0.4	62	1010	550	Gabbro, mg, tr to 0.5% fine diss cpy
Certificate A17-07189	494037	4.00	5.00	1.00	10	185	59	< 0.3	56	315	373	Gabbro, mg, tr to 0.5% fine diss cpy
	494038	5.00	6.00	1.00	87	2140	585	1.3	87	2940	1070	Gabbro, mg to peg, tr to 1.0% diss cpy
	494039	6.00	7.05	1.05	103	2540	717	1.1	104	2580	1290	Gabbro, mg to peg, tr to 1.0% diss and blebby cpy
	494040	7.05	8.05	1.00	32	693	201	0.4	68	1220	654	Gabbro, mg to cg, tr diss cpy
	494041	8.05	9.05	1.00	38	864	262	0.3	67	856	631	Gabbro, mg to cg, tr to 1.0% diss to blebby cpy
	494042	9.05	10.05	1.00	11	45	27	< 0.3	50	296	144	Gabbro, mg to cg, tr diss cpy
	494043	Field Blank			< 2	13	12	< 0.3	56	127	76	Gabbro, mg
	494044	Standard			91	556	413	0.8	193	2690	3710	CDN ME 1310
EB17 - CH 13+50W	494045	0.00	1.00	1.00	42	480	102	0.5	78	1420	381	Leucogabbro, cg
403926.0mE												
5141201.0mN	494046	1.00	2.00	1.00	12	77	19	< 0.3	45	517	153	Leucogabbro, cg
Azimuth 195	494047	2.00	3.00	1.00	5	23	63	< 0.3	45	223	81	Leucogabbro, cg
Sampled July 10, 2017	494048	3.00	3.92	0.92	< 2	< 5	< 5	< 0.3	44	46	124	Leucogabbro, cg
Certificate A17-09013	494049	3.92	4.92	1.00	4	85	12	< 0.3	44	102	128	Leucogabbro, cg
	494050	4.92	5.87	0.95	4	9	5	< 0.3	48	65	99	Leucogabbro, mg to cg, streaky plagioclase
	494051	5.87	6.87	1.00	6	20	10	< 0.3	50	146	141	Gabbro to leucogabbro, mg to cg
	494052	6.87	7.87	1.00	14	167	54	< 0.3	58	384	199	Gabbro to leucogabbro, mg to cg, streaky plag
	494053	7.87	8.87	1.00	24	233	79	0.3	66	812	258	Gabbro to leucogabbro, mg to cg, coarse plag
	494054	8.87	9.80	0.93	14	116	35	< 0.3	72	635	217	Gabbro to leucogabbro, tr cpy
	494055	9.80	10.80	1.00	32	313	91	0.3	81	1050	299	Gabbro to leucogabbro, tr cpy, fine blebby clusters
	494056	10.80	11.70	0.90	50	664	218	0.5	74	1230	336	Gabbro to leucogabbro, tr cpy, fine blebby clusters
	494057	11.70	12.72	1.02	27	407	152	< 0.3	71	543	304	Gabbro, mg, trace sulphdes, rusty

	494058	12.72	13.62	0.90	9	39	22	< 0.3	60	439	196	Gabbro to leucogabbro, mg to cg, coarse plag
	494059	13.62	14.56	0.94	69	637	287	0.7	106	1570	445	Gabbro to leucogabbro, mg, 0.5% cpy, clusters
	494060	14.56	15.56	1.00	51	465	217	< 0.3	81	802	398	Gabbro, fg, rusty
	494061	15.56	16.56	1.00	18	362	140	< 0.3	66	368	287	Gabbro, fg
	494062	16.56	17.00	0.44	7	82	47	< 0.3	51	130	205	Gabbro, fg
	494063	Field Blank			4	18	17	< 0.3	51	110	64	Gabbro, mg
	494064	Standard			67	647	481	0.8	199	2700	3700	CDN ME 1310
EB17 - CH 6+40W	494065	0.00	1.00	1.00	49	892	246	1.1	76	1860	959	
404602.7mE												
5141391.3mN	494066	1.00	2.00	1.00	68	1160	331	1	68	1890	927	
Azimuth 172	494067	2.00	3.00	1.00	55	1070	301	0.9	77	1990	1070	
Sampled Oct 26, 2017	494068	3.00	4.00	1.00	54	1050	268	1	81	2190	1330	
Certificate A17-12473	494069	4.00	5.00	1.00	63	637	164	0.7	82	1830	1080	
	494070	Field Blank			< 2	16	13	< 0.3	53	92	75	Gabbro, mg
	494071	Standard			74	599	469	0.7	185	2420	3380	CDN ME 1310
EB17-CH14+00W	494072	0.00	1.00	1.00	4	29	8	< 0.3	34	181	149	
403870.4mE												
5141187.2mN	494073	1.00	2.00	1.00	5	62	16	< 0.3	48	207	216	
Azimuth 190	494074	2.00	3.02	1.02	5	7	< 5	< 0.3	33	295	139	
Sampled Oct 27, 2017	494075	3.02	4.00	0.98	19	170	47	< 0.3	47	555	185	
Certificate A17-12473	494076	4.00	5.01	1.01	9	146	34	0.5	38	643	192	
	494077	5.01	6.01	1.00	18	272	71	0.4	52	745	234	
	494078	6.01	7.01	1.00	8	100	29	< 0.3	30	218	153	
	494079	7.01	7.99	0.98	< 2	15	< 5	< 0.3	34	59	139	
	494080	7.99	9.01	1.02	< 2	42	17	< 0.3	40	70	154	
	494081	9.01	10.00	0.99	36	705	184	0.7	83	1190	490	
	494082	10.00	11.00	1.00	2	12	< 5	< 0.3	46	111	170	
	494083	11.00	12.01	1.01	97	1110	285	0.7	80	1390	405	
	494084	12.01	13.01	1.00	3	74	25	< 0.3	59	65	210	
	494085	13.01	13.98	0.97	50	939	337	0.5	69	948	450	
	494086	13.98	15.04	1.06	18	326	121	0.3	60	723	320	
	494087	15.04	16.04	1.00	91	1730	581	1.5	83	2390	821	

494088	16.04	17.06	1.02	71	1790	617	1.3	82	2180	631	
494089	17.06	17.96	0.90	73	1780	531	0.9	89	1620	627	
494090	Field Blank			2	23	16	< 0.3	52	110	75	Gabbro, mg
494091	Standard			72	607	467	0.7	190	2460	3470	CDN ME 1310

Number of Channel Samples - 79 Cutting by - Greg Smith, A-Star Prospecting, Thunder Bay
Total Meters Channeled - 76.8 Sampled by - R. H. Sutcliffe/Greg Smith
Number of QA/QC samples - 6 blanks/6 stds Claim Number - 4272475
Total of Samples for Analysis - 91 NAD83, UTM Zone 17T

UTM location by DGPS at north end of channel, samples collected proceeding on azimuth
Field blank - collected at 406307mE 5141796mN
Azimuth relative to Astronomic North, magnetic declination 9° west
mg - med grained; cg - coarse grained,; peg - pegmatitic; tr - trace; diss - disseminated; cpy - chalcopyrite

Appendix 3. – Diamond Drill Core Logs

East Bull Project, Sudbury Mining Division, Ontario

Hole ID: EB17-01

Target: Twin ME00-19 Claim: 1227910

Datum: NAD83 17T Easting: 405231m E Northing: 5141481m N Elev: 355m (all hand held Garmin Etrex GPS)

Azimuth (Astronomic North): 180° Incl: -45° Core diameter: BQTK

Date Started: Oct 29, 2017 Date Completed: Oct 31, 2017 EOH: 78.0 m

Logged By: Richard Sutcliffe Sampled By: Richard Sutcliffe/Craig Maitland

Casing left in hole

Survey Data

Method: Devi Shot Astronomic north corrected for -9.1 degrees declination

Meterage: 15 m Azimuth:175.87 Incl: -44.15 Mag: 55056

Meterage: 78 m Azimuth: 172.75 Incl. -43.92 Mag: 53856

East Bull Project, Sudbury Mining Division, Ontario														
Hole ID: EB17-01														
From m	To m	Width m	Lith Code	Description	Sample	From	To	Au ppb	Pd ppb	Pt ppb	Ag ppm	Co ppm	Cu ppm	Ni ppm
0	1.8	1.8	OB	Blders										
1.8	17.3	15.5	LG	Medium grained (mg) leuco-gabbro with coarse grained (cg) to pegmatitic (peg) patches Photo cg to peg at 10 m Traces Chalcopryrite (cpy)										
17.3	32.4	14.9	GB	Mg gabbro to leuco gabbro with 10% anorthositic patches; Photo anorthositic patch at 17.4 m Photo mottled patchy inclusions(?) at 30.1 m Traces disseminated cpy	677101	28	29	< 2	112	127	< 0.3	73	24	379
					677102	29	30	25	1360	679	< 0.3	25	90	129
					677103	30	31	102	3560	1410	0.8	74	2100	923
					677104	31	32	165	3350	1500	1.6	92	4240	1710
					677105	32	33	70	1380	483	1.1	99	2870	1450

East Bull Project, Sudbury Mining Division, Ontario														
Hole ID: EB17-01														
From m	To m	Width m	Lith Code	Description	Sample	From	To	Au ppb	Pd ppb	Pt ppb	Ag ppm	Co ppm	Cu ppm	Ni ppm
32.4	78.0	45.6	GB	Mg gabbro/clinopyroxenite	677106	33	34	41	924	313	0.8	93	1670	1230
				Photo 35.8 m plag with amphibole reaction;	677107	34	35	47	1320	380	0.8	103	1910	1610
				Photo 38.9 m cg cpy bleb	677108	35	36	49	1060	296	0.6	75	1560	1230
				Photo 36.1 coarse pyrrhotite (po)/cpy bleb	677109	36	37	75	8090	1820	1.7	168	3660	2940
				Pyrite becomes greater than cpy at 55.5 m	677110	37	38	30	546	164	0.4	95	1090	996
					677111	38	39	77	966	288	1	93	2570	1260
					677112	39	40	114	1600	486	1.2	107	3240	1710
					677113	40	41	60	822	162	1	86	2100	942
					677114	41	42	46	267	79	0.4	89	926	982
42.0	60.0	18.0	GB	Blocky ground RQD 42-45 m 15% 45-48 m 10% 48-51 m 25% 51-54 m 75% 54-57 m 80% 57-60 m 50%										
74.2	74.5	0.3	SY	Buff coloured syenite										
78.0				EOH										

Pavey Ark Minerals Inc. – Diamond Drill Core Log

East Bull Project, Sudbury Mining Division, Ontario

Hole ID: EB17-02

Target: In-fill hole to test PGM zone down dip Claim: 1227910

Datum: NAD83 17T Easting: 405229 mE Northing: 5141539 mN Elev: 363 m (Hand held Garmin Etrex GPS)

Azimuth (Astronomic North): 180° Inclination: -46° Core diameter: BQTK EOH: 141.0 m

Date Started: Nov 1, 2017 Date Completed: Nov 4, 2017

Logged By: Richard Sutcliffe Sampled By: Richard Sutcliffe/Craig Maitland

Casing left in hole

Survey Data

Method: Devi Shot Astronomic north corrected for -9.1 degrees declination

Meterage: 15 m Azimuth:184.88 Incl: -45.42 Mag: 55048

Meterage: 51m Azimuth: 183.3 Incl. -45.37 Mag: 54833

Meterage:99m Azimuth: 183.85 Incl. -44.59 Mag: 54519

Meterage: 141 Azimuth: 183.72 Incl. -43.80 Mag: 54680

East Bull Project, Sudbury Mining Division, Ontario														
Hole ID: EB17-02														
From m	To m	Width m	Lith Code	Description	Sample	From	To	Au ppb	Pd ppb	Pt ppb	Ag ppm	Co ppm	Cu ppm	Ni ppm
0.0	2.0	2.0	OB	Overburden										
2.0	21.3	19.3	DB	Diabase, mg 20.0 – 20.4 Quartz Vein TCA 30°										
21.3	22.0	0.7	GB	Foliated mg gabbro, foliation 30° TCA										
22.0	45.45	23.45	DB	Diabase Fractured chilled diabase grades into fg diabase; Fg diabase grades to mg diabase at 28.5 m; Mg diabase grades to fg diabase at 43.5 m; Chilled diabase contact at 30° TCA										
45.45	56.1	10.65	GB	Cg gabbro, anorthositic gabbro 52.3 m sheared gabbro, foliation 30° TCA 53.6 – 54.7 m fg diabase 54.7 – 55.2 m cg gabbro 55.2 – 55.7 m cg anorthositic gabbro 55.7 – 56.1 m mg gabbro										
56.1	73.5	17.4	DB	Diabase chill 30° TCA 57.5 – 59.0 m Diabase fg 59.0 – 69.4 m Diabase mg, with leucoxene 69.4 – 69.7 m quartz vein 30 cm 69.7 – 72.0 m fg diabase										

East Bull Project, Sudbury Mining Division, Ontario														
Hole ID: EB17-02														
From m	To m	Width m	Lith Code	Description	Sample	From	To	Au ppb	Pd ppb	Pt ppb	Ag ppm	Co ppm	Cu ppm	Ni ppm
73.5	75.9	1.6	SZ	Shear zone, 15 to 20° TCA										
75.9	80.1	4.2	GB	Gabbro, mg, plagioclase clots, fractured and altered										
80.1	85.0	4.9	SZ	Strong shear zone, 20 – 25° TCA Augen, quartz eyes in strong foliation, photo shear at 82 m, 83.6 - 83.9 m quartz vein 30 cm 84.0 – 84.5 highly fractured, all core broken										
85.0	92.5	7.5	GB	Gabbro, mg, locally foliated, altered TR to 1% cpy, clusters to 1 cm, sporadic throughout, Dark green in colour to light grey green where altered	677115	84.7	86	11	23	10	< 0.3	40	569	77
					677116	86	87	24	408	148	0.6	69	1050	608
					677117	87	88	2	25	14	< 0.3	90	151	740
					677118	88	89	43	459	201	0.9	96	1980	963
					677119	89	90	84	1470	553	1.8	111	3660	1730
					677120	90	91	24	676	254	0.6	67	1220	769
					677121	91	92	46	826	281	0.8	93	2080	1240
				677122	92	93	< 2	14	6	< 0.3	81	61	1000	
92.5	93.2	0.7	DB	Diabase, chilled										
93.2	95.8	2.6	SZ	Shear zone, 65-70° TCA, broken core										

East Bull Project, Sudbury Mining Division, Ontario														
Hole ID: EB17-02														
From m	To m	Width m	Lith Code	Description	Sample	From	To	Au ppb	Pd ppb	Pt ppb	Ag ppm	Co ppm	Cu ppm	Ni ppm
95.8	102.0	6.2	GB	Gabbro, mg, minor sulphide py, cpy	677123	96	97	6	23	9	<0.3	69	192	177
					677126	97	98	21	57	19	<0.3	79	610	249
					677127	98	99	21	105	44	0.5	77	659	416
					677128	99	100	36	221	98	0.5	79	1230	534
					677129	100	101	45	241	105	0.8	79	1600	651
					677130	101	102	15	95	43	0.4	114	658	86
102.0	118.0	16.0	GB	Gabbro, fg, py & cpy , clusters of cpy to 1 cm, locally at 107.0 m up to 2% Locally at 109.5 plagioclase phenos to 1 cm	677131	102	103	23	123	51	0.5	92	866	382
					677132	103	104	9	17	7	0.4	73	485	139
					677133	104	105	10	72	33	<0.3	74	316	246
					677134	105	106	12	70	49	<0.3	81	388	247
					677135	106	107	13	72	50	0.4	99	624	274
					677136	107	108	23	75	63	<0.3	90	611	260
					677137	108	109	4	44	39	<0.3	60	176	162
					677138	109	110	6	44	42	0.3	76	413	138
					677139	110	111	11	38	26	0.3	69	563	144
					677140	111	112	7	15	6	<0.3	79	219	82
					677141	112	113	7	36	16	<0.3	84	278	225
					677142	113	114	24	34	13	0.3	81	614	225
					677143	114	115	7	64	39	<0.3	86	333	347
					677144	115	116	4	76	18	<0.3	78	155	205
					677145	116	117	3	22	18	<0.3	79	128	238
677146	117	118	8	33	14	<0.3	76	222	183					
118.0	119.0	1.0	GB	Gabbro, cg, 1 to 2% disseminated sulphide, py>cpy	677147	118	119	9	266	158	<0.3	83	354	197

East Bull Project, Sudbury Mining Division, Ontario														
Hole ID: EB17-02														
From m	To m	Width m	Lith Code	Description	Sample	From	To	Au ppb	Pd ppb	Pt ppb	Ag ppm	Co ppm	Cu ppm	Ni ppm
119.0	126.5	7.5	GB	Gabbro, mg, altered, pale green grey, foliated, trace py	677148	119	120	68	307	354	0.7	75	1050	326
					677151	120	121	25	22	16	0.6	84	982	291
					677152	121	122	12	28	17	< 0.3	74	447	190
					677153	122	123	17	62	28	0.3	92	636	251
					677154	123	124	14	157	80	< 0.3	91	369	479
					677155	124	125	17	113	63	0.4	103	715	332
					677156	125	126	13	27	12	< 0.3	94	496	194
					677157	126	127	7	24	12	< 0.3	79	247	153
126.5	129.9	3.4	MV	Mafic, fg, black to dark grey, foliated, disseminated py in cubes to 3 mm										
129.9	136.6	6.7	MV	Silicified zone, green grey, quartz phyrlic, quartz veinlets, foliated 45o TCA, lenses of quartz in chloritic matrix										
136.6	141.0	4.4	MV	Mafic, fg, foliated, 45° TCA, trace disseminated PY										
141.0				EOH										

Pavey Ark Minerals Inc. – Diamond Drill Core Log

East Bull Project, Sudbury Mining Division, Ontario

Hole ID: EB17-03

Target: Twin of hole ME99-16 Claim: 1227910

Datum: NAD83 17T Easting: 405605 mE Northing: 5141576 mN Elev: 383 m (Hand held Garmin Etrex GPS)

Azimuth (Astronomic North): 180° Inclination: -45° Core diameter: BQTK EOH: 96.0 m

Date Started: Nov 7, 2017 Date Completed: Nov 10, 2017 (shut down early due to very cold weather)

Logged By: Richard Sutcliffe Sampled By: Richard Sutcliffe/Craig Maitland

Casing left in hole

Survey Data

Method: Devi Shot Astronomic north corrected for -9.1 degrees declination

Meterage: 15 m Azimuth:177.15 Incl: -43.41 Mag: 55162

Meterage: 51m Azimuth: 178.86 Incl. -44.21 Mag: 55040

Meterage: 96 m Azimuth: 177.84 Incl. -43.37 Mag: 54948

East Bull Project, Sudbury Mining Division, Ontario														
Hole ID: EB17-03														
From m	To m	Width m	Lith Code	Description	Sample	From	To	Au ppb	Pd ppb	Pt ppb	Ag ppm	Co ppm	Cu ppm	Ni ppm
0.0	4.5	4.5	OB	Overburden										
4.5	5.0	0.5	GB	Gabbro, pegmatitic altered										
5.0	21.5	16.5	GB	Gabbro, mg, 2 to 3 mm, hypidiomorphic, locally cg patches with 5% intercumulus leucoxene, Dark grey green, locally altered and greenish (e.g. 10.5 m)										
21.5	24.8	3.3	SY	Syenite 21.5-21.8m gradational contact 21.8-22.2m hybrid syenite 22.3-22.4m fg lt green syenite 22.4-22.8m porph syenite with 1 cm feldspar phenos 22.8-23.2m hybrid mg syenite/gabbro, 30% mafics 23.2-23.6m fg syenite, green to buff coloured, 2-3 mm mafic phenos 23.6-24.3m hybrid syenite/gabbro 24.3-24.8m fg syenite, pink and porphyritic										
24.8	32.0	17.2	GB	Gabbro, cg up to 1 cm, dk green grey, patches of leucoxene to >1 cm, Photo of leucoxene at 30.7 m										
32.0	38.7	6.7	GB	Mg leucoxene gabbro										
38.7	41.1	2.4	GB	Pegmatitic gabbro, >1 cm grain size										

East Bull Project, Sudbury Mining Division, Ontario														
Hole ID: EB17-03														
From m	To m	Width m	Lith Code	Description	Sample	From	To	Au ppb	Pd ppb	Pt ppb	Ag ppm	Co ppm	Cu ppm	Ni ppm
41.1	50.4	9.3	GB	Leucoxene gabbro, mg to cg, dark grey, 5 – 10% leucoxene, 40% mafics, plagioclase variably altered, Photo leucoxene at 41.5 m	677158	48	49	3	22	23	< 0.3	50	108	74
					677159	49	50	4	16	21	< 0.3	49	131	70
50.4	53.0	2.6	MG	Melagabbro, mg, dark green, equigranular, trace cpy	677160	50	51	3	31	45	< 0.3	54	148	98
					677161	51	52	3	20	18	< 0.3	63	77	169
					677162	52	53	2	11	21	< 0.3	60	63	174
53.0	57.0	4.0	MG	Melagabbro, mg, clots of coarse plagioclase, trace sulphides, Photo at 55.0 m of plagioclase clots	677163	53	54	2	6	10	< 0.3	36	46	74
					677164	54	55	< 2	10	7	< 0.3	52	57	121
					677165	55	56	16	16	< 5	< 0.3	40	238	65
					677166	56	57	< 2	16	13	< 0.3	53	46	88

East Bull Project, Sudbury Mining Division, Ontario

Hole ID: EB17-03

From m	To m	Width m	Lith Code	Description	Sample	From	To	Au ppb	Pd ppb	Pt ppb	Ag ppm	Co ppm	Cu ppm	Ni ppm
57.0	78.0	21.0	MG	Melagabbro, mg, trace to 1% Cpy, strongest from 63.0 to 72.0 m, intervals with plagioclase clots from 72.0 to 78.0 m, strongest sulphides at 64.4 & 70.5 m	677167	57	58	2	11	14	< 0.3	123	42	433
					677168	58	58	< 2	13	11	< 0.3	122	27	653
					677171	59	60	3	238	257	< 0.3	127	15	672
					677172	60	61	3	434	909	< 0.3	116	13	488
					677173	61	62	22	1480	651	< 0.3	133	281	709
					677174	62	63	88	2070	856	0.5	116	1420	759
					677175	63	64	115	1120	434	0.7	98	1880	577
					677176	64	65	111	1570	577	0.8	125	2080	619
					677177	65	66	108	924	331	0.8	133	2070	508
					677178	66	67	44	554	190	< 0.3	110	803	423
					677179	67	68	97	1680	495	0.5	116	1580	655
					677180	68	69	86	1440	526	0.4	103	1250	537
					677181	69	70	63	31	11	0.7	113	1380	469
					677182	70	71	125	1330	530	1.2	112	2680	593
					677183	71	72	20	283	122	< 0.3	73	263	245
					677184	72	73	39	224	79	< 0.3	74	706	367
					677185	73	74	27	345	122	< 0.3	67	631	312
					677186	74	75	13	122	45	< 0.3	60	313	270
					677187	75	76	5	11	< 5	< 0.3	66	168	201
					677188	76	77	4	< 5	< 5	< 0.3	71	158	231
677191	77	78	3	14	< 5	< 0.3	68	103	189					

East Bull Project, Sudbury Mining Division, Ontario														
Hole ID: EB17-03														
From m	To m	Width m	Lith Code	Description	Sample	From	To	Au ppb	Pd ppb	Pt ppb	Ag ppm	Co ppm	Cu ppm	Ni ppm
78.0	83.5	5.5	MG	Melagabbro, mg, uniform dark green colour, trace to 2% cpy with minor py, fine disseminated, local clusters Strongest sulphides at 82.0 to 83.5 m	677192	78	79	39	425	170	0.3	94	897	427
					677193	79	80	44	111	44	< 0.3	99	993	428
					677194	80	81	201	3190	1120	1.1	108	3240	1450
					677195	81	82	192	4610	1600	0.9	115	2720	1050
					677196	82	83	109	2030	706	0.5	96	1520	730
					677197	83	84	103	2360	841	< 0.3	92	859	590
83.5	87.8	4.3	MV	Mafic, fg, trace to 1% pyrite, with minor cpy, 2 to 3 cm granitic veins at 84.4 and 84.6 m, broken granitic veins or inclusions at 85.5 through 87.8 m	677198	84	85	77	921	335	< 0.3	83	1130	400
					677199	85	86	73	1610	571	< 0.3	69	1010	442
					677200	86	87	19	982	346	< 0.3	59	570	276
87.8	90.0	2.2	FZ	Water lost, core washed out, RQD 10%, foliated but not sheared										
90.0	90.8	0.8	GB	Gabbro, mg, trace cpy										
90.8	92.0	1.2	MV	Mafic, fg										
92.0	93.0	1.0	ID	Intermediate dike, foliated, 45° TCA										
93.0	96.0	3.0	MV	Mafic, fg, shear at 95.2 m, 45° TCA, broken core for 2 cm										
96.0				EOH										

Appendix 4. Assay results for re-sampling of Freewest core

HOLE-ID	FROM	TO	Length	Orig WO	Orig Sample	AU_PPb	PT_PPb	PD_PPb	AG_PPM	CU_PPM	NI_PPM	Reassay WO	Sample #	Au ppb	Pd ppb	Pt ppb	Ag ppm	Co ppm	Cu ppm	Ni ppm
99-02	6.70	7.40	0.70	R15692	2077	45	100	325	1.50	1037	555	A17-13082	677401	27	285	71	0.6	101	939	773
99-02	7.40	8.30	0.90	R15692	2078	33	84	215	1.20	640	393	A17-13082	677402	25	298	82	0.5	138	790	680
99-02	8.30	9.00	0.70	R15692	2079	148	111	375	2.00	1898	694	A17-13082	677403	34	381	81	0.8	151	1360	888
99-02	9.00	9.80	0.80	R15692	2080	34	92	283	1.50	900	468	A17-13082	677404	28	345	76	0.6	141	1200	764
99-02	9.80	10.60	0.80	R15692	2081	42	63	308	1.70	1920	400	A17-13082	677405	39	342	93	0.6	155	2510	602
99-02	10.60	11.30	0.70	R15692	2082	27	98	291	1.00	570	256	A17-13082	677406	19	395	94	< 0.3	97	678	650
99-02	11.30	12.20	0.90	R15692	2083	35	102	319	1.50	805	666	A17-13082	677407	30	342	89	0.5	98	791	734
99-02	12.20	13.10	0.90	R15692	2084	27	68	247	1.80	1012	662	A17-13082	677408	22	323	78	0.6	84	721	561
99-02	13.10	14.10	1.00	R15692	2085	23	145	368	1.30	665	346	A17-13082	677409	33	420	174	0.4	51	689	389
99-02	14.10	15.10	1.00	R15692	2086	31	202	457	1.70	964	406	A17-13082	677410	39	688	209	0.6	64	1230	554
99-02	15.10	16.10	1.00	R15692	2087	36	292	857	1.70	798	460	A17-13082	677411	22	447	157	0.3	52	800	497
99-02	16.10	17.10	1.00	R15692	2088	40	297	729	1.60	1781	642	A17-13082	677412	40	977	335	0.8	79	1660	607
99-02	17.10	18.10	1.00	R15692	2089	14	134	242	1.00	374	298	A17-13082	677413	7	276	128	< 0.3	61	290	321
99-02	18.10	18.80	0.70	R15692	2090	10	34	30	0.40	84	49	A17-13082	677414	< 2	< 5	< 5	< 0.3	46	94	124
99-02	20.40	20.90	0.50	R15692	2093	130	752	1573	2.50	3956	1018	A17-13082	677418	43	372	76	0.5	91	1320	745
99-02	20.90	21.90	1.00	R15692	2094	100	78	186	1.50	626	275	A17-13082	677419	25	241	80	< 0.3	71	816	530
99-02	21.90	22.90	1.00	R15692	2095	88	180	476	2.20	2246	737	A17-13082	677420	85	517	171	1	86	2460	845
99-02	22.90	23.90	1.00	R15692	2096	45	222	588	1.70	1838	924	A17-13082	677421	40	816	328	0.5	80	1140	984
99-02	23.90	24.90	1.00	R15692	2097	50	113	364	1.90	1770	580	A17-13082	677422	53	397	135	0.5	63	1210	579
99-02	28.50	29.50	1.00	R15692	2102	72	356	682	1.70	2810	630	A17-13082	677423	72	1020	530	1.1	70	2540	717
99-02	29.50	30.50	1.00	R15692	2103	53	214	346	1.40	1106	355	A17-13082	677424	102	1600	957	1.3	97	2870	1110
99-02	30.50	31.50	1.00	R15692	2104	71	419	655	1.20	1100	265	A17-13082	677425	68	712	444	0.6	83	1420	476
99-02	31.50	32.50	1.00	R15692	2105	86	364	731	1.30	1662	363	A17-13082	677426	98	799	489	0.9	92	1830	652
99-02	32.50	33.50	1.00	R15692	2106	100	392	802	1.30	1920	444	A17-13082	677427	197	1210	599	0.7	91	2420	815
99-02	33.50	34.50	1.00	R15692	2107	93	258	540	2.00	2484	649	A17-13082	677428	113	822	363	1.1	87	2580	1080
99-02	34.50	35.50	1.00	R15692	2108	77	157	316	1.70	2312	749	A17-13082	677429	77	438	143	1	99	2130	1190

HOLE-ID	FROM	TO	Length	Orig WO	Orig Sample	AU_PPb	PT_PPb	PD_PPb	AG_PPM	CU_PPM	NI_PPM	Reassay WO	Sample #	Au ppb	Pd ppb	Pt ppb	Ag ppm	Co ppm	Cu ppm	Ni ppm
99-02	35.50	36.50	1.00	R15692	2109	69	203	330	1.10	1560	422	A17-13082	677430	68	391	233	0.6	83	1590	719
99-02	36.50	37.50	1.00	R15692	2110	65	112	253	1.90	2416	710	A17-13082	677431	68	271	118	0.9	81	2310	849
99-02	37.50	38.50	1.00	R15692	2111	44	124	212	1.50	1521	646	A17-13082	677432	62	338	153	0.8	85	1830	804
99-02	38.50	39.50	1.00	R15692	2112	66	118	278	1.70	1976	782	A17-13082	677433	66	318	103	0.7	84	1980	862
99-02	39.50	40.50	1.00	R15692	2113	75	102	269	2.00	2290	966	A17-13082	677434	88	318	94	1.3	126	3000	1230
99-02	40.50	41.10	0.60	R15692	2114	61	158	306	2.00	1792	485	A17-13082	677435	66	389	192	1.5	84	1910	770
99-02	41.10	41.60	0.50	R15692	2115	135	334	755	3.00	4972	1044	A17-13082	677436	87	761	302	1.3	104	3270	1190
99-02	41.60	42.60	1.00	R15692	2116	109	301	582	2.10	3286	845	A17-13082	677437	103	605	273	1.2	96	3190	1100
99-02	42.60	43.60	1.00	R15692	2117	82	302	365	1.50	2468	475	A17-13082	677438	144	574	455	1.4	86	3440	892
00-02	40.00	41.00	1.00	R19089	31609	8	43	396	1.60	119	84	A17-12480	494101	4	27	47	< 0.3	50	154	111
00-02	41.00	42.00	1.00	R19089	31610	20	412	688	1.30	199	48	A17-12480	494102	6	39	100	< 0.3	51	270	99
00-02	42.00	43.00	1.00	R19089	31611	63	412	1360	2.60	1048	532	A17-12480	494103	49	786	258	0.5	71	1160	475
00-02	43.00	44.00	1.00	R19089	31612	74	353	1635	1.70	740	164	A17-12480	494104	31	393	124	< 0.3	49	566	134
00-02	44.00	45.00	1.00	R19089	31613	103	403	1909	3.10	1962	772	A17-12480	494105	76	1510	460	0.6	84	1770	935
00-02	45.00	46.00	1.00	R19089	31614	52	303	1094	2.00	1210	602	A17-12480	494106	41	707	254	< 0.3	69	865	689
00-02	46.00	47.00	1.00	R19089	31615	26	125	308	1.90	342	351	A17-12480	494107	26	401	121	0.4	70	493	513
00-02	47.00	48.00	1.00	R19089	31616	75	134	408	1.60	584	247	A17-12480	494108	29	447	149	< 0.3	67	517	362
00-02	48.00	49.00	1.00	R19089	31617	28	297	285	1.20	514	105	A17-12480	494109	28	119	40	< 0.3	54	515	153
00-02	49.00	50.00	1.00	R19089	31618	52	334	550	1.40	920	191	A17-12480	494110	34	366	191	< 0.3	62	771	376
00-02	50.00	51.00	1.00	R19089	31619	50	308	545	1.60	716	215	A17-12480	494111	56	628	344	< 0.3	74	785	509
00-02	51.00	52.00	1.00	R19089	31620	58	531	645	2.00	1616	640	A17-12480	494112	70	539	427	0.5	74	1540	917
00-02	52.00	53.00	1.00	R19089	31621	76	135	360	1.80	1588	644	A17-12480	494113	63	416	129	0.6	71	1480	930
00-02	53.00	54.00	1.00	R19089	31622	54	197	582	1.60	535	357	A17-12480	494114	36	239	45	< 0.3	62	769	542
00-02	54.00	55.00	1.00	R19089	31623	80	131	206	1.50	620	237	A17-12480	494115	30	442	272	< 0.3	61	623	408
00-02	55.00	56.00	1.00	R19089	31624	49	310	563	1.60	808	293	A17-12480	494116	67	915	302	< 0.3	72	763	545
00-07	3.00	4.00	1.00	R19091	31770	25	164	574	3.40	740	696	A17-12480	494117	30	678	202	0.4	92	1020	793
00-07	4.00	5.00	1.00	R19091	31771	25	123	286	3.20	710	930	A17-12480	494118	28	493	167	< 0.3	130	867	1060
00-07	5.00	6.00	1.00	R19091	31772	33	307	526	3.40	1116	840	A17-12480	494121	45	660	304	0.5	95	1100	953

HOLE-ID	FROM	TO	Length	Orig WO	Orig Sample	AU_PPb	PT_PPb	PD_PPb	AG_PPM	CU_PPM	NI_PPM	Reassay WO	Sample #	Au ppb	Pd ppb	Pt ppb	Ag ppm	Co ppm	Cu ppm	Ni ppm
00-07	6.00	7.00	1.00	R19091	31773	56	321	768	4.20	1530	1264	A17-12480	494122	92	995	354	1	122	1780	1260
00-07	7.00	8.00	1.00	R19091	31774	35	226	520	3.60	994	846	A17-12480	494123	110	762	278	0.8	142	1200	790
00-07	8.00	9.00	1.00	R19091	31775	83	212	537	4.80	1768	852	A17-12480	494124	58	797	257	1	136	1690	1030
00-07	9.00	10.00	1.00	R19091	31776	236	97	390	3.80	1470	529	A17-12480	494125	51	354	115	0.5	120	983	622
00-07	10.00	11.00	1.00	R19091	31777	38	91	293	3.40	760	391	A17-12480	494126	34	379	104	0.5	128	810	526
00-07	11.00	12.00	1.00	R19091	31778	35	73	205	3.40	1222	448	A17-12480	494127	35	179	58	0.8	122	1080	553
00-07	12.00	13.00	1.00	R19091	31779	27	34	148	3.20	756	465	A17-12480	494128	34	175	40	0.5	88	843	568
00-07	13.00	14.00	1.00	R19091	31780	8	5	45	2.60	212	205	A17-12480	494129	10	58	20	< 0.3	83	220	309
00-07	14.00	15.00	1.00	R19091	31781	26	49	201	3.00	656	369	A17-12480	494130	13	118	37	< 0.3	89	277	377
00-07	15.00	16.00	1.00	R19091	31782	19	24	78	3.40	740	305	A17-12480	494131	29	103	30	< 0.3	150	756	392
00-07	16.00	17.00	1.00	R19091	31783	36	79	310	3.10	708	398	A17-12480	494132	35	433	99	0.5	94	920	496
00-07	17.00	18.00	1.00	R19091	31784	41	62	194	4.00	1630	452	A17-12480	494133	56	239	72	0.4	169	729	533
00-07	18.00	19.00	1.00	R19091	31785	25	55	175	3.80	858	439	A17-12480	494134	42	215	66	0.4	125	864	525
00-07	19.00	20.00	1.00	R19091	31786	36	83	251	3.40	998	368	A17-12480	494135	36	245	316	0.4	82	838	422
00-07	20.00	21.00	1.00	R19091	31787	55	62	198	4.00	1306	419	A17-12480	494136	47	197	56	0.4	97	1040	481
00-07	21.00	22.00	1.00	R19091	31788	43	411	822	3.60	964	662	A17-12480	494137	42	854	497	0.4	103	825	684
00-07	22.00	23.00	1.00	R19091	31789	18	90	345	4.00	1422	545	A17-12480	494138	14	380	138	0.6	57	1080	475
00-07	23.00	24.00	1.00	R19091	31790	7	143	313	1.80	494	291	A17-12480	494141	8	291	263	< 0.3	77	204	465
00-07	24.00	25.00	1.00	R19091	31791	15	251	359	3.00	268	277	A17-12480	494142	22	542	320	< 0.3	48	274	361
00-07	25.00	26.00	1.00	R19091	31792	40	283	542	2.60	1288	564	A17-12480	494143	65	1690	567	0.5	91	1520	849
00-07	26.00	27.00	1.00	R19091	31793	29	181	240	2.60	1054	541	A17-12480	494144	58	490	353	0.6	102	1380	803
00-07	31.00	32.00	1.00	R19091	31798	121	389	901	3.20	2110	465	A17-12480	494145	271	1210	416	0.7	101	2380	827
00-07	32.00	33.00	1.00	R19091	31799	134	486	1049	2.80	2194	502	A17-12480	494146	345	1210	566	0.8	103	3270	955
00-07	33.00	34.00	1.00	R19091	31800	126	672	1274	3.60	1652	400	A17-12480	494147	87	1150	599	< 0.3	96	1130	553
00-07	34.00	35.00	1.00	R19091	31801	43	292	360	2.00	431	202	A17-12480	494148	79	638	438	< 0.3	100	705	422
00-07	35.00	36.00	1.00	R19091	31802	181	526	875	2.80	2158	356	A17-12480	494149	136	753	538	0.6	90	1810	584
00-07	36.00	37.00	1.00	R19091	31803	88	241	419	3.60	2012	513	A17-12480	494150	133	567	247	1	94	2590	824
00-07	37.00	38.00	1.00	R19091	31804	129	348	775	4.20	2880	992	A17-12480	494151	133	762	357	1.2	110	3170	1090

HOLE-ID	FROM	TO	Length	Orig WO	Orig Sample	AU_PPb	PT_PPb	PD_PPb	AG_PPM	CU_PPM	NI_PPM	Reassay WO	Sample #	Au ppb	Pd ppb	Pt ppb	Ag ppm	Co ppm	Cu ppm	Ni ppm
00-07	38.00	39.00	1.00	R19091	31805	50	123	371	2.80	1692	846	A17-12480	494152	66	481	162	0.6	94	1770	1040
00-07	39.00	40.00	1.00	R19091	31806	90	246	431	3.20	2024	555	A17-12480	494153	122	621	415	0.9	95	2860	731
00-07	40.00	41.00	1.00	R19091	31807	28	127	165	1.40	347	122	A17-12480	494154	19	180	118	< 0.3	62	334	205
00-07	41.00	42.00	1.00	R19091	31808	66	351	405	3.00	2480	221	A17-12480	494155	37	481	464	< 0.3	75	573	325
00-07	42.00	43.00	1.00	R19091	31809	122	641	745	2.80	1782	411	A17-12480	494156	108	1000	867	0.5	97	1840	684
00-10	100.00	101.00	1.00	R19191	31993	11	170	469	1.70	7	278	A17-12475	677013	17	775	157	< 0.3	91	109	450
00-10	101.00	102.00	1.00	R19191	31994	111	432	1562	1.40	244	344	A17-12475	677014	55	2050	996	< 0.3	100	437	614
00-10	102.00	103.00	1.00	R19191	31995	42	237	615	2.10	622	495	A17-12475	677015	42	753	216	< 0.3	123	833	860
00-10	103.00	104.00	1.00	R19191	31996	36	320	615	2.40	610	220	A17-12475	677016	49	836	352	< 0.3	30	676	249
00-10	104.00	105.00	1.00	R19191	31997	22	126	440	3.40	2174	472	A17-12475	677017	59	1130	255	0.6	76	1430	684
00-10	105.00	106.00	1.00	R19191	31998	15	5	30	2.30	92	68	A17-12475	677018	3	24	7	< 0.3	25	80	98
00-10	106.00	107.00	1.00	R19191	31999	58	143	640	2.80	1528	616	A17-12475	677021	23	394	111	0.4	62	945	511
00-10	107.00	108.00	1.00	R19191	32000	11	24	99	1.90	183	199	A17-12475	677022	11	164	58	< 0.3	55	340	302
00-10	108.00	109.00	1.00	R19191	32001	44	137	353	2.40	1022	522	A17-12475	677023	47	333	134	< 0.3	77	943	579
00-10	109.00	110.00	1.00	R19191	32002	22	183	435	2.00	538	1002	A17-12475	677024	15	215	62	< 0.3	74	432	572
00-10	110.00	111.00	1.00	R19191	32003	67	242	623	2.60	1776	834	A17-12475	677025	74	864	314	0.6	89	1520	1090
00-10	111.00	112.00	1.00	R19191	32004	54	202	357	1.80	750	612	A17-12475	677026	56	396	182	< 0.3	72	824	667
00-10	112.00	113.00	1.00	R19191	32005	20	187	409	1.70	127	284	A17-12475	677027	90	1690	348	< 0.3	76	137	549
00-10	113.00	114.00	1.00	R19191	32006	27	84	193	2.20	368	372	A17-12475	677028	12	134	41	< 0.3	51	250	409
00-10	114.00	115.00	1.00	R19191	32007	7	5	20	2.00	39	125	A17-12475	677029	< 2	15	7	< 0.3	40	38	217
00-10	115.00	116.00	1.00	R19191	32008	8	5	24	1.60	48	119	A17-12475	677030	< 2	23	14	< 0.3	42	39	214
00-10	116.00	117.00	1.00	R19191	32009	6	10	12	1.80	28	140	A17-12475	677031	< 2	13	13	< 0.3	54	24	287
00-10	117.00	118.00	1.00	R19191	32010	5	31	25	1.80	31	163	A17-12475	677032	3	22	18	< 0.3	50	32	288
00-10	118.00	119.00	1.00	R19191	32011	12	70	204	1.70	86	242	A17-12475	677033	3	91	38	< 0.3	50	49	296
00-10	119.00	120.00	1.00	R19191	32012	14	85	188	1.30	205	320	A17-12475	677034	13	213	85	< 0.3	81	197	502
00-10	120.00	121.00	1.00	R19191	32013	19	56	303	1.40	328	203	A17-12475	677035	7	229	77	< 0.3	61	142	348
00-10	121.00	122.00	1.00	R19191	32014	40	144	513	1.80	560	417	A17-12475	677036	41	791	175	< 0.3	75	681	686
00-10	122.00	123.00	1.00	R19191	32015	9	5	31	1.60	65	238	A17-12475	677037	< 2	6	< 5	< 0.3	61	51	422

HOLE-ID	FROM	TO	Length	Orig WO	Orig Sample	AU_PPb	PT_PPb	PD_PPb	AG_PPM	CU_PPM	NI_PPM	Reassay WO	Sample #	Au ppb	Pd ppb	Pt ppb	Ag ppm	Co ppm	Cu ppm	Ni ppm
00-10	123.00	124.00	1.00	R19191	32016	7	18	26	1.20	87	176	A17-12475	677038	< 2	23	12	< 0.3	43	40	290
00-10	124.00	125.00	1.00	R19191	32017	8	5	62	1.50	49	219	A17-12475	677041	< 2	61	< 5	< 0.3	48	42	299
00-10	125.00	126.00	1.00	R19191	32018	8	5	96	1.00	14	88	A17-12475	677042	3	120	< 5	< 0.3	33	13	155
00-10	126.00	127.00	1.00	R19191	32019	9	10	61	1.20	17	85	A17-12475	677043	< 2	69	10	< 0.3	33	18	150
00-10	127.00	128.00	1.00	R19191	32020	7	35	103	1.30	16	75	A17-12475	677044	3	182	52	< 0.3	41	12	152
00-10	128.00	129.00	1.00	R19191	32021	20	42	105	1.40	187	200	A17-12475	677045	10	166	51	< 0.3	66	272	382
00-10	129.00	130.00	1.00	R19191	32022	11	32	110	2.20	75	189	A17-12475	677046	4	163	46	< 0.3	63	68	362
00-10	130.00	130.50	0.50	R19191	32023	16	84	135	1.60	257	132	A17-12475	677047	8	62	29	< 0.3	59	288	277
00-10	130.50	131.00	0.50	R19191	32024	62	141	558	2.10	1420	477	A17-12475	677048	103	828	209	1.1	66	2380	878
00-10	131.00	132.00	1.00	R19191	32025	18	40	103	1.60	181	241	A17-12475	677049	8	102	31	< 0.3	48	196	376
00-10	132.00	133.00	1.00	R19191	32026	34	48	111	1.30	712	122	A17-12475	677050	23	69	36	< 0.3	46	618	213
00-10	133.00	134.00	1.00	R19191	32027	14	150	182	1.10	105	158	A17-12475	677051	11	279	247	< 0.3	67	160	345
00-10	134.00	135.00	1.00	R19191	32028	15	73	152	1.00	146	136	A17-12475	677052	27	613	302	< 0.3	64	511	348
00-10	135.00	136.00	1.00	R19191	32029	168	1523	3577	1.80	1603	586	A17-12475	677053	146	3460	1620	0.4	111	1510	766
00-10	136.00	137.00	1.00	R19191	32030	10	42	64	1.00	61	112	A17-12475	677054	< 2	10	9	< 0.3	53	42	195
00-10	137.00	138.00	1.00	R19191	32031	6	35	27	1.00	41	63	A17-12475	677055	2	11	16	< 0.3	51	38	182
00-10	138.00	139.00	1.00	R19191	32032	6	247	101	0.90	34	111	A17-12475	677056	8	78	122	< 0.3	69	96	293
00-10	144.00	145.00	1.00	R19191	32038	85	181	411	3.70	3081	1340	A17-12475	677057	74	443	172	1.5	109	2910	1400
00-10	145.00	146.00	1.00	R19191	32039	66	133	337	2.30	2225	1022	A17-12475	677058	51	329	110	0.9	90	2300	1100
00-10	146.00	147.00	1.00	R19191	32040	46	109	270	2.00	1565	726	A17-12475	677061	36	252	89	0.6	86	1740	764
00-10	147.00	148.00	1.00	R19191	32041	39	92	240	1.60	1185	569	A17-12475	677062	33	252	82	0.3	81	1160	721
00-10	148.00	149.00	1.00	R19191	32042	16	55	88	1.40	451	353	A17-12475	677063	13	59	21	< 0.3	83	422	449
00-10	149.00	150.00	1.00	R19191	32043	51	70	141	2.40	1050	439	A17-12475	677064	40	163	99	0.3	96	1220	683
00-10	150.00	151.00	1.00	R19191	32044	60	142	280	2.50	1656	614	A17-12475	677065	50	289	114	0.4	104	1370	808
00-12	14.30	15.00	0.70	R19194	32112	73	227	771	4.80	1780	388	A17-12480	494157	66	630	126	0.8	95	2140	631
00-12	15.00	16.00	1.00	R19194	32113	97	131	329	4.60	1822	379	A17-12480	494158	35	340	92	0.7	72	1390	422
00-12	16.00	17.00	1.00	R19194	32114	43	57	184	3.40	1500	244	A17-12480	494161	44	369	76	0.6	76	1720	364
00-12	17.00	18.00	1.00	R19194	32115	38	79	316	3.00	1386	396	A17-12480	494162	35	268	61	0.4	61	1320	408

HOLE-ID	FROM	TO	Length	Orig WO	Orig Sample	AU_PPb	PT_PPb	PD_PPb	AG_PPM	CU_PPM	NI_PPM	Reassay WO	Sample #	Au ppb	Pd ppb	Pt ppb	Ag ppm	Co ppm	Cu ppm	Ni ppm
00-12	18.00	19.00	1.00	R19194	32116	82	175	548	3.50	2560	688	A17-12480	494163	75	745	170	1.1	99	2420	910
00-12	19.00	20.00	1.00	R19194	32117	42	91	272	2.20	1342	444	A17-12480	494164	49	464	153	0.4	90	1450	675
00-12	20.00	21.00	1.00	R19194	32118	53	202	420	2.00	1480	390	A17-12480	494165	65	513	124	0.4	83	1730	642
00-12	21.00	22.00	1.00	R19194	32119	34	115	311	1.80	992	323	A17-12480	494166	24	251	68	< 0.3	79	609	325
00-12	28.00	29.00	1.00	R19194	32126	32	92	217	2.00	764	228	A17-12480	494167	16	176	61	< 0.3	35	373	186
00-12	29.00	30.00	1.00	R19194	32127	215	238	772	2.70	1460	411	A17-12480	494168	58	749	222	0.5	58	1290	485
00-12	30.00	31.00	1.00	R19194	32128	39	122	347	2.10	758	361	A17-12480	494169	72	725	226	0.5	79	1400	549
00-17	42.00	43.00	1.00	R19261	32387	37	186	722	2.00	808	452	A17-12480	494170	25	681	145	< 0.3	81	734	453
00-17	43.00	44.00	1.00	R19261	32388	322	391	1177	4.20	1942	600	A17-12480	494171	128	1080	260	1.2	105	2070	662
00-17	44.00	45.00	1.00	R19261	32389	55	378	843	2.30	812	399	A17-12480	494172	28	725	365	< 0.3	75	615	497
00-17	45.00	46.00	1.00	R19261	32390	48	392	916	2.80	1112	595	A17-12480	494173	42	846	336	0.4	80	1320	579
00-17	46.00	47.00	1.00	R19261	32391	113	355	1057	3.00	2698	658	A17-12480	494174	66	955	278	0.4	96	1780	837
00-17	47.00	48.00	1.00	R19261	32392	50	212	623	2.30	1403	680	A17-12480	494175	55	543	180	0.4	84	1320	682
00-17	48.00	49.00	1.00	R19261	32393	45	126	414	2.40	1576	720	A17-12480	494176	49	446	116	0.4	89	1710	785
00-17	49.00	50.00	1.00	R19261	32394	25	92	358	2.30	1083	849	A17-12480	494177	24	377	90	< 0.3	96	1030	1080
00-17	50.00	51.00	1.00	R19261	32395	38	128	467	3.20	2350	1012	A17-12480	494178	44	394	103	0.6	97	2000	1060
00-17	51.00	52.00	1.00	R19261	32396	36	103	373	2.80	1646	838	A17-12480	494181	35	511	118	0.7	112	1980	1080
00-17	52.00	53.00	1.00	R19261	32397	27	91	383	2.60	1030	704	A17-12480	494182	22	404	92	0.3	90	1060	766
00-17	53.00	54.00	1.00	R19261	32398	37	103	411	2.80	1516	864	A17-12480	494183	38	552	147	0.5	103	1640	978
00-17	54.00	55.00	1.00	R19261	32399	47	91	636	3.40	3120	875	A17-12480	494184	25	547	101	0.9	104	2640	999
00-17	55.00	56.00	1.00	R19261	32400	21	42	150	2.60	700	506	A17-12480	494185	15	154	40	< 0.3	71	676	561
00-17	56.00	57.00	1.00	R19261	32401	43	108	404	2.60	1929	957	A17-12480	494186	43	395	95	0.8	100	1890	935
00-17	57.00	58.00	1.00	R19261	32402	28	75	250	2.30	1200	566	A17-12480	494187	30	232	64	0.4	68	1250	553
00-17	58.00	59.00	1.00	R19261	32403	39	108	357	2.60	1230	833	A17-12480	494188	15	280	81	< 0.3	74	791	724
00-17	59.00	60.00	1.00	R19261	32404	31	109	458	2.20	1023	755	A17-12480	494189	29	407	116	0.5	76	1620	748
00-17	60.00	61.00	1.00	R19261	32405	165	240	669	3.00	3328	1088	A17-12480	494190	69	594	182	0.9	78	2480	883
00-17	61.00	62.00	1.00	R19261	32406	29	96	378	2.70	1550	789	A17-12480	494191	27	438	103	0.8	86	2110	970
00-17	62.00	63.00	1.00	R19261	32407	39	131	521	2.80	1980	946	A17-12480	494192	24	491	118	0.5	79	1460	885

HOLE-ID	FROM	TO	Length	Orig WO	Orig Sample	AU_PPb	PT_PPb	PD_PPb	AG_PPM	CU_PPM	NI_PPM	Reassay WO	Sample #	Au ppb	Pd ppb	Pt ppb	Ag ppm	Co ppm	Cu ppm	Ni ppm
00-17	63.00	64.00	1.00	R19261	32408	30	227	650	2.60	1810	958	A17-12480	494193	29	797	311	1	130	2330	1480
00-17	64.00	65.00	1.00	R19261	32409	29	128	497	2.40	1363	655	A17-12480	494194	21	502	126	0.5	73	1590	758
00-17	65.00	66.00	1.00	R19261	32410	60	171	706	3.00	3320	1130	A17-12480	494195	100	666	144	1.2	101	2910	1100
00-17	66.00	67.00	1.00	R19261	32411	38	136	469	2.60	1885	772	A17-12480	494196	43	550	174	0.7	82	1930	981
00-17	67.00	67.40	0.40	R19261	32412	75	292	652	3.20	2878	1083	A17-12480	494197	66	877	268	1.2	108	2940	1130
00-17	67.40	68.00	0.60	R19261	32413	41	90	296	2.60	1948	810	A17-12480	494198	50	283	71	1.4	107	2400	968
00-17	68.00	69.00	1.00	R19261	32414	35	95	316	2.60	1992	870	A17-12475	677001	41	354	91	0.6	110	1980	930
00-17	69.00	70.00	1.00	R19261	32415	44	174	529	2.60	2014	769	A17-12475	677002	63	706	297	0.9	132	2550	1090
00-17	70.00	71.00	1.00	R19261	32416	19	106	314	2.40	838	485	A17-12475	677003	75	268	63	0.4	72	1170	429
00-17	71.00	72.00	1.00	R19261	32417	4	18	25	1.70	204	180	A17-12475	677004	23	24	6	< 0.3	44	315	188
00-17	72.00	73.00	1.00	R19261	32418	10	45	136	1.70	519	270	A17-12475	677005	8	111	26	< 0.3	46	418	259
00-17	73.00	74.00	1.00	R19261	32419	57	139	420	2.60	2228	675	A17-12475	677006	59	398	113	0.7	86	2030	815
00-17	74.00	75.00	1.00	R19261	32420	28	49	119	2.80	1570	428	A17-12475	677007	24	259	71	0.4	88	676	555
00-17	75.00	76.00	1.00	R19261	32421	8	42	104	1.80	356	316	A17-12475	677008	7	88	29	< 0.3	53	200	239
00-17	76.00	77.00	1.00	R19261	32422	19	68	141	2.20	558	297	A17-12475	677009	4	64	20	< 0.3	42	304	184
00-17	77.00	78.00	1.00	R19261	32423	104	154	451	3.50	3626	608	A17-12475	677010	54	297	102	< 0.3	89	1270	479
00-17	78.00	79.00	1.00	R19261	32424	85	191	494	3.80	2186	658	A17-12475	677011	105	591	205	1.3	103	2270	729
00-17	79.00	80.00	1.00	R19261	32425	68	195	442	2.80	1542	458	A17-12475	677012	51	459	150	1.2	96	1480	509
00-18	28.00	29.00	1.00	R19310	32481	11	261	425	1.40	264	252	A17-12475	677066	35	842	360	< 0.3	45	264	318
00-18	29.00	30.00	1.00	R19310	32482	27	185	493	1.90	706	401	A17-12475	677067	20	612	238	< 0.3	64	750	547
00-18	30.00	31.00	1.00	R19310	32483	19	153	336	2.00	189	186	A17-12475	677068	3	89	119	< 0.3	37	110	211
00-18	31.00	32.00	1.00	R19310	32484	31	376	532	2.20	329	292	A17-12475	677069	33	1130	605	< 0.3	71	875	511
00-18	32.00	33.00	1.00	R19310	32485	37	209	732	2.30	1066	512	A17-12475	677070	29	627	150	0.3	55	985	495
00-18	33.00	34.00	1.00	R19310	32486	34	371	924	2.20	755	498	A17-12475	677071	31	975	460	0.3	95	1130	724
00-18	34.00	34.75	0.75	R19310	32487	10	107	271	1.60	200	265	A17-12475	677072	14	491	197	< 0.3	73	226	407
00-18	36.00	37.00	1.00	R19310	32488	47	277	860	3.00	990	672	A17-12475	677073	27	561	243	< 0.3	87	726	737
00-18	37.00	38.00	1.00	R19310	32489	52	338	1016	3.00	2108	1493	A17-12475	677074	169	1290	355	1.1	98	2520	1140
00-18	38.00	39.00	1.00	R19310	32490	58	240	851	3.40	2300	1148	A17-12475	677075	311	819	230	1.5	121	3760	1060

HOLE-ID	FROM	TO	Length	Orig WO	Orig Sample	AU_PPb	PT_PPb	PD_PPb	AG_PPM	CU_PPM	NI_PPM	Reassay WO	Sample #	Au ppb	Pd ppb	Pt ppb	Ag ppm	Co ppm	Cu ppm	Ni ppm
00-18	39.00	40.00	1.00	R19310	32491	38	229	582	2.50	1226	655	A17-12475	677076	40	498	145	0.7	103	1890	784
00-18	40.00	41.00	1.00	R19310	32492	18	65	159	1.90	500	303	A17-12475	677077	16	182	60	< 0.3	76	645	434
00-18	41.00	42.00	1.00	R19310	32493	54	430	1274	2.10	2347	612	A17-12475	677078	94	1410	492	2.2	105	2360	1010
00-18	42.00	43.00	1.00	R19310	32494	58	105	369	2.60	1686	575	A17-12475	677081	49	315	88	0.7	86	1690	654
00-18	43.00	44.00	1.00	R19310	32495	49	137	424	2.50	1360	558	A17-12475	677082	32	332	99	0.5	73	1300	567
00-18	44.00	45.00	1.00	R19310	32496	21	32	106	1.80	493	231	A17-12475	677083	8	38	10	< 0.3	54	386	210
00-18	45.00	46.00	1.00	R19310	32497	10	78	197	1.10	412	164	A17-12475	677084	10	215	99	< 0.3	45	350	258
00-18	46.00	47.00	1.00	R19310	32498	58	309	916	2.50	1756	844	A17-12475	677085	53	960	362	0.7	73	1660	736
00-18	47.00	48.00	1.00	R19310	32499	31	111	358	2.00	760	370	A17-12475	677086	26	297	86	0.3	51	821	457
00-18	48.00	49.00	1.00	R19310	32500	43	165	627	2.30	1753	696	A17-12475	677087	48	659	194	0.7	75	1660	755
00-18	49.00	50.00	1.00	R19310	32501	50	205	643	2.80	2156	883	A17-12475	677088	77	776	268	1.2	99	2640	1170
00-18	50.00	51.00	1.00	R19310	32502	24	144	409	1.80	978	528	A17-12475	677089	39	542	233	0.5	74	1200	663
00-18	51.00	52.00	1.00	R19310	32503	18	100	150	2.10	816	403	A17-12475	677090	24	321	119	0.4	69	1210	590
00-18	52.00	53.00	1.00	R19310	32504	27	84	224	2.80	2796	480	A17-12475	677091	47	555	139	1.2	49	3120	449
00-18	53.00	54.00	1.00	R19310	32505	201	234	1080	2.40	2053	795	A17-12475	677092	68	1000	271	1	62	2120	857
00-18	54.00	55.00	1.00	R19310	32506	51	155	456	2.50	1702	612	A17-12475	677093	41	320	91	1.6	76	2450	604
00-18	55.00	56.00	1.00	no cert	32507	49	172	474	2.40	1868	794	A17-12475	677094	83	784	318	1.3	111	2560	1110
00-18	56.00	57.00	1.00	no cert	32508	62	63	391	2.70	2218	882	A17-12475	677095	63	440	173	1.2	104	2540	1100
00-18	57.00	58.00	1.00	no cert	32509	81	219	579	2.80	1910	776	A17-12475	677096	77	594	252	0.8	66	1970	750
00-18	58.00	59.00	1.00	no cert	32510	54	209	485	3.10	1646	652	A17-12475	677097	66	525	229	1.3	77	1600	790
00-18	59.00	60.00	1.00	no cert	32511	66	437	1115	2.70	1878	640	A17-12475	677098	159	1080	548	0.9	94	1860	815
00-18	60.00	61.00	1.00	no cert	32512	51	225	492	2.10	1390	442	A17-12475	677099	91	678	323	0.7	73	1670	617
00-18	61.00	62.00	1.00	no cert	32513	84	431	1182	3.80	2618	1074	A17-12475	677100	116	1120	480	1.7	83	3010	897
00-21	63.00	64.00	1.00	R19300	32661	52	1530	2467	1.60	380	319	RY17239792	H343051	50	4530	1540	-0.5	99	389	542
00-21	64.00	65.00	1.00	R19300	32662	128	456	1169	1.90	830	578	RY17239792	H343052	112	1650	590	-0.5	86	1130	1035
00-21	65.00	66.00	1.00	R19300	32663	44	365	1700	1.50	340	269	RY17239792	H343053	56	1400	461	-0.5	78	403	570
00-21	66.00	67.00	1.00	R19300	32664	9	86	226	1.40	97	283	RY17239792	H343054	3	91	45	-0.5	71	53	524
00-21	67.00	68.00	1.00	R19300	32665	121	333	1185	1.70	1202	485	RY17239792	H343055	72	1085	452	-0.5	70	1170	762

HOLE-ID	FROM	TO	Length	Orig WO	Orig Sample	AU_PPb	PT_PPb	PD_PPb	AG_PPM	CU_PPM	NI_PPM	Reassay WO	Sample #	Au ppb	Pd ppb	Pt ppb	Ag ppm	Co ppm	Cu ppm	Ni ppm
00-21	68.00	69.00	1.00	R19300	32666	152	1677	2909	1.90	2446	436	RY17239792	H343056	227	3890	1665	1.1	89	3410	1055
00-21	69.00	70.00	1.00	R19300	32667	105	664	1474	1.60	1510	484	RY17239792	H343057	100	2180	772	0.8	81	1640	1075
00-21	70.00	71.00	1.00	R19300	32668	100	327	986	1.60	1450	403	RY17239792	H343058	122	2430	772	1	79	2600	1125
00-21	71.00	72.00	1.00	R19300	32669	43	356	907	1.40	860	291	RY17239792	H343059	54	901	421	0.8	65	1440	751
00-21	72.00	73.00	1.00	R19300	32670	60	936	2726	1.40	974	329	RY17239792	H343060	84	2540	1045	0.8	59	1890	715
00-21	73.00	74.00	1.00	R19300	32671	12	114	331	1.10	316	160	RY17239792	H343061	24	577	252	-0.5	51	330	400
00-21	74.00	75.00	1.00	R19300	32672	47	659	1201	1.30	672	223	RY17239792	H343062	31	709	296	-0.5	73	332	562
00-21	75.00	76.00	1.00	R19300	32673	84	744	1372	1.30	1254	389	RY17239792	H343063	73	835	397	0.5	73	1380	802
00-21	76.00	77.00	1.00	R19300	32674	7	83	190	1.20	206	125	RY17239792	H343064	13	147	67	-0.5	48	268	250
00-21	77.00	78.00	1.00	R19300	32675	13	591	662	1.60	698	181	RY17239792	H343065	6	267	107	-0.5	62	143	340
00-21	78.00	79.00	1.00	R19300	32676	70	786	1831	1.50	1278	602	RY17239792	H343066	136	3320	1035	0.8	106	2530	1300
00-21	79.00	80.00	1.00	R19300	32677	87	569	1309	2.00	1276	384	RY17239792	H343067	215	2110	888	0.6	77	1730	863
00-21	80.00	81.00	1.00	R19300	32678	76	452	1113	1.60	852	411	RY17239792	H343068	46	774	382	-0.5	56	546	482
00-21	81.00	82.00	1.00	R19300	32679	41	254	531	1.70	636	370	RY17239792	H343071	88	567	241	-0.5	77	745	752
00-21	82.00	83.00	1.00	R19300	32680	56	314	542	1.40	499	246	RY17239792	H343072	47	557	272	-0.5	66	711	478
00-21	83.00	84.00	1.00	R19300	32681	84	433	839	1.70	1488	414	RY17239792	H343073	95	1070	615	0.9	86	1960	934
00-21	84.00	85.00	1.00	R19300	32682	88	707	1564	2.20	1598	471	RY17239792	H343074	188	2660	940	0.9	90	2540	1280
00-21	85.00	86.00	1.00	R19300	32683	114	928	2288	3.20	3536	1220	RY17239792	H343075	370	2980	1140	2.1	87	4980	1370
00-21	86.00	87.00	1.00	R19300	32684	113	590	1663	2.70	2718	836	RY17239792	H343076	124	1785	756	1.1	91	2940	1240

Appendix 5 – QA/QC Assay Results

Program	CRM	Sample #	Cert#	Au	Pd	Pt	Ag	Co	Cu	Ni
Actlabs										
		CRM Values +/- 2σ		63+/-16	563+/-40	433+/-38	1.0	190+/-20	2760+/-220	3790+/-220
Freewest core	ME-1310	494120	A17-12480	69	561	423	0.7	192	2530	3510
Freewest core	ME-1310	494140	A17-12480	59	566	431	0.7	193	2570	3530
Freewest core	ME-1310	494160	A17-12480	88	573	422	0.7	191	2540	3460
Freewest core	ME-1310	494200	A17-12480	67	550	424	0.7	190	2520	3490
Freewest core	ME-1310	677020	A17-12475	63	601	435	0.7	194	2720	3600
Freewest core	ME-1310	677040	A17-12475	72	572	436	0.7	194	2690	3620
Freewest core	ME-1310	677060	A17-12475	58	573	443	0.8	196	2730	3680
Freewest core	ME-1310	677417	A17-13082	73	591	460				
Drilling	ME-1310	677125	A17-13086	99	624	477	0.9	184	2840	3590
Drilling	ME-1310	677170	A17-13024	70	575	442	0.7	191	2630	3600
Channel	ME-1310	494017	A17-07189	75	742	556	0.8	198	2790	3820
Channel	ME-1310	494032	A17-07189	74	595	465	0.7	196	2780	3750
Channel	ME-1310	494044	A17-07189	91	556	413	0.8	193	2690	3710
Channel	ME-1310	494064	A17-09013	67	647	481	0.8	199	2700	3700
Channel	ME-1310	494071	A17-12473	74	599	469	0.7	185	2420	3380
Channel	ME-1310	494091	A17-12473	72	607	467	0.7	190	2460	3470
			Avg	73.2	595.8	452.8	0.7	192.4	2640.7	3594.0
		CRM Values +/- 2σ		84+/-22	834+/-54	98+/-22		52+/-4	413+/-24	656+/-28
Freewest core	LDI-1	494180	A17-12480	91	879	111	< 0.3	57	441	640
Freewest core	LDI-1	677080	A17-12475	102	977	110	< 0.3	56	454	638
Freewest core	LDI-1	677415	A17-13082	96	920	95				
Drilling	LDI-1	677150	A17-13086	99	916	102	< 0.3	55	477	651
Drilling	LDI-1	677190	A17-13024	113	889	111	< 0.3	55	438	636
			Avg.	100.2	916.2	105.8	0	55.75	452.5	641.25

Program	Blank	Sample #	Cert#	Au	Pd	Pt	Ag	Co	Cu	Ni
Freewest core	00-06 blank	494119	A17-12480	3	5	< 5	< 0.3	5	44	10
Freewest core	00-06 blank	494139	A17-12480	3	< 5	< 5	< 0.3	5	28	12
Freewest core	00-06 blank	494159	A17-12480	2	8	5	< 0.3	4	28	10
Freewest core	00-06 blank	494179	A17-12480	12	8	< 5	< 0.3	6	45	17
Freewest core	00-06 blank	494199	A17-12480	< 2	6	< 5	0.3	4	22	13
Freewest core	00-06 blank	677019	A17-12475	7	12	< 5	< 0.3	4	22	12
Freewest core	00-06 blank	677039	A17-12475	< 2	19	< 5	< 0.3	5	149	22
Freewest core	00-06 blank	677059	A17-12475	5	18	6	0.4	11	158	76
Freewest core	00-06 blank	677079	A17-12475				0.4	6	29	11
Freewest core	00-06 blank	677416	A17-13082	< 2	< 5	< 5				
Drilling	00-06 blank	677124	A17-13086	57	355	277	0.5	8	41	23
Drilling	00-06 blank	677149	A17-13086	< 2	< 5	< 5	0.5	6	22	9
Drilling	00-06 blank	677169	A17-13024	< 2	< 5	< 5	< 0.3	3	2	12
Drilling	00-06 blank	677189	A17-13024	< 2	< 5	< 5	0.4	3	6	5
Channel	GB Field Blank	494018	A17-07189	< 2	20	18	< 0.3	52	100	84
Channel	GB Field Blank	494031	A17-07189	< 2	16	14	< 0.3	49	116	66
Channel	GB Field Blank	494043	A17-07189	< 2	13	12	< 0.3	56	127	76
Channel	GB Field Blank	494063	A17-09013	4	18	17	< 0.3	51	110	64
Channel	GB Field Blank	494070	A17-12473	< 2	16	13	< 0.3	53	92	75
Channel	GB Field Blank	494090	A17-12473	2	23	16	< 0.3	52	110	75
ALS Labs										
Freewest core	ME-1310	H343070		NSS	NSS	NSS	1.2	198	2890	4130
Freewest core	00-06 blank	H343069		-0.001	0.008	0.005	-0.5	7	23	9

Appendix 6. Assay Certificates

See separate attachments



Date Submitted: 13-Jul-17
Invoice No.: A17-07189
Invoice Date: 31-Jul-17
Your Reference: EAST BULL

Pavey Ark Minerals Inc.
100 Broad Leaf Cresent
Ancaster ON L9G 3R8
Canada

ATTN: Richard H. Sutcliffe

CERTIFICATE OF ANALYSIS

44 Rock samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1C-OES 50g Fire Assay ICPOES

Code 1F2 Total Digestion ICP(TOTAL)

REPORT **A17-07189**

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Notes:

Values which exceed the upper limit should be assayed for accurate numbers.

CERTIFIED BY:

A handwritten signature in black ink, appearing to read "Emmanuel Esemé". The signature is stylized with a large, sweeping 'E' and 'S'.

Emmanuel Esemé , Ph.D.
Quality Control

ACTIVATION LABORATORIES LTD.
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TELEPHONE +905 648-9611 or +1.888.228.5227 FAX +1.905.648.9613
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Results

Activation Laboratories Ltd.

Report: A17-07189

Analyte Symbol	Au	Pd	Pt	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na
Unit Symbol	ppb	ppb	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%
Lower Limit	2	5	5	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01
Method Code	FA-ICP	FA-ICP	FA-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
494001	36	903	284	0.4	8.29	< 3	45	< 1	< 2	4.63	1.0	115	124	1090	9.44	12	< 1	0.18	7.40	37	1200	< 1	1.36
494002	47	624	184	0.6	10.9	4	134	< 1	< 2	6.70	0.9	78	55	1410	6.42	14	< 1	0.63	4.89	36	781	< 1	1.35
494003	47	372	348	0.4	12.0	< 3	169	< 1	< 2	7.73	0.7	63	32	1130	5.39	18	< 1	0.63	3.35	28	633	< 1	1.97
494004	76	596	148	0.6	11.9	< 3	123	< 1	< 2	6.99	0.9	100	55	1730	6.54	16	< 1	0.56	4.08	35	756	< 1	1.68
494005	227	904	233	1.3	11.1	3	116	< 1	< 2	7.01	1.2	109	52	3370	6.53	14	< 1	0.45	4.46	32	747	< 1	1.56
494006	26	412	140	0.4	10.3	< 3	121	< 1	< 2	6.95	0.8	78	65	1240	6.09	14	< 1	0.40	4.92	32	765	< 1	1.65
494007	58	788	256	0.6	10.3	9	130	< 1	< 2	6.91	1.0	102	55	1500	6.19	13	< 1	0.52	4.82	34	727	< 1	1.53
494008	71	596	172	0.6	10.4	< 3	128	< 1	< 2	7.04	1.3	98	63	1420	6.55	14	< 1	0.44	4.74	30	733	< 1	1.64
494009	28	525	154	0.3	10.5	< 3	123	< 1	< 2	6.48	< 0.3	72	23	974	6.01	13	< 1	0.44	5.09	39	802	< 1	1.32
494010	51	450	200	0.5	9.04	6	110	< 1	< 2	7.06	< 0.3	78	112	1500	7.38	15	< 1	0.37	5.09	25	954	< 1	1.29
494011	85	608	197	0.9	10.6	< 3	219	< 1	< 2	7.03	1.8	71	58	2110	6.80	15	< 1	0.65	4.36	27	855	< 1	1.54
494012	66	432	282	< 0.3	9.21	< 3	99	< 1	< 2	6.42	0.9	71	84	876	6.91	14	< 1	0.35	5.51	26	986	< 1	1.31
494013	71	460	180	0.5	9.77	< 3	117	< 1	< 2	6.98	0.7	70	71	1510	6.92	15	< 1	0.39	4.51	24	934	< 1	1.51
494014	93	474	145	0.8	8.81	< 3	126	< 1	< 2	6.50	0.5	52	62	1760	6.50	18	< 1	0.36	3.45	18	850	< 1	2.11
494015	94	737	259	0.9	10.9	< 3	193	< 1	< 2	7.35	1.2	71	88	2390	5.69	14	< 1	0.72	3.67	24	770	< 1	1.57
494016	56	496	166	0.5	9.01	3	107	< 1	< 2	6.34	0.5	75	80	1250	8.17	15	< 1	0.37	5.69	34	1130	< 1	1.06
494017	75	742	556	0.8	2.73	157	90	< 1	< 2	3.15	0.8	198	2380	2790	10.7	6	< 1	0.17	13.8	27	1330	< 1	0.07
494018	< 2	20	18	< 0.3	7.31	6	281	< 1	< 2	6.04	0.4	52	36	100	8.95	17	< 1	1.12	3.73	19	1430	< 1	2.14
494019	37	609	369	< 0.3	5.23	< 3	41	< 1	< 2	5.10	0.4	67	540	511	8.05	10	< 1	0.11	7.39	25	1600	< 1	0.79
494020	117	1140	600	0.7	5.66	< 3	62	< 1	< 2	5.66	1.0	71	666	1610	8.20	10	< 1	0.12	7.72	23	1560	< 1	1.02
494021	240	2400	1190	1.4	6.17	< 3	61	< 1	< 2	4.93	0.6	69	561	2040	8.85	10	< 1	0.12	7.65	26	1540	< 1	1.15
494022	95	457	179	0.7	8.81	< 3	96	< 1	< 2	5.94	1.2	79	174	2390	6.77	14	< 1	0.25	5.75	25	1130	< 1	1.91
494023	147	550	254	1.0	6.47	< 3	80	< 1	< 2	5.64	0.9	99	234	2810	8.26	12	< 1	0.17	6.57	22	1330	< 1	1.44
494024	72	305	87	0.7	8.95	< 3	122	< 1	< 2	6.82	0.6	79	173	1910	6.29	14	< 1	0.35	4.73	20	934	< 1	2.10
494025	109	546	175	0.8	9.58	< 3	178	< 1	< 2	5.81	0.5	86	150	2460	6.61	17	< 1	0.45	4.71	27	965	< 1	2.22
494026	123	773	476	0.5	3.97	< 3	28	< 1	< 2	5.54	1.0	91	477	1460	9.61	7	< 1	0.07	8.89	23	1830	< 1	0.45
494027	51	387	220	< 0.3	5.70	< 3	75	< 1	< 2	5.82	0.5	73	334	743	8.90	10	< 1	0.15	7.41	23	1620	< 1	1.34
494028	216	1310	740	1.4	4.10	< 3	55	< 1	< 2	5.81	1.2	90	334	3270	9.94	10	< 1	0.12	7.70	17	1740	< 1	0.67
494029	64	361	175	< 0.3	6.15	< 3	58	< 1	< 2	6.68	0.6	66	342	936	8.06	10	< 1	0.13	6.57	16	1450	< 1	1.31
494030	19	77	33	< 0.3	7.84	< 3	91	< 1	< 2	7.44	< 0.3	48	575	515	6.19	15	< 1	0.19	4.97	16	1140	< 1	1.98
494031	< 2	16	14	< 0.3	7.32	< 3	572	< 1	< 2	5.49	0.4	49	29	116	8.68	17	< 1	1.24	3.57	21	1360	< 1	2.17
494032	74	595	465	0.7	2.67	173	82	< 1	< 2	3.10	0.8	196	2890	2780	10.6	6	< 1	0.17	13.6	27	1320	< 1	0.07
494033	112	1920	451	1.3	9.79	< 3	190	< 1	< 2	6.65	1.1	83	138	2570	7.89	18	< 1	0.56	4.47	29	1070	< 1	1.90
494034	12	59	44	< 0.3	6.61	5	104	< 1	< 2	7.71	0.5	73	25	593	8.30	16	< 1	0.22	3.96	11	1180	< 1	2.13
494035	71	714	189	1.0	9.67	< 3	94	< 1	< 2	5.45	1.5	99	195	2050	8.90	18	< 1	0.31	4.78	30	1160	< 1	1.88
494036	50	1020	439	0.4	10.7	< 3	176	< 1	< 2	6.16	0.9	62	203	1010	6.90	16	< 1	0.53	4.56	32	1040	< 1	1.90
494037	10	185	59	< 0.3	11.5	< 3	171	< 1	< 2	5.91	0.4	56	224	315	6.53	16	< 1	0.62	4.53	34	1020	< 1	2.01
494038	87	2140	585	1.3	9.45	< 3	199	< 1	< 2	6.01	1.9	87	252	2940	6.62	14	< 1	0.58	4.44	41	965	< 1	1.88
494039	103	2540	717	1.1	9.56	4	189	< 1	< 2	6.03	1.1	104	223	2580	6.90	13	< 1	0.65	5.68	46	1030	< 1	1.29
494040	32	693	201	0.4	10.8	< 3	209	< 1	< 2	6.26	0.8	68	406	1220	5.90	14	< 1	0.64	4.84	53	981	< 1	2.02
494041	38	864	262	0.3	10.6	6	167	< 1	< 2	5.42	0.7	67	293	856	6.59	15	< 1	0.51	4.71	39	1010	< 1	2.01
494042	11	45	27	< 0.3	6.88	< 3	134	< 1	< 2	6.46	< 0.3	50	81	296	7.16	14	< 1	0.22	4.81	16	1190	< 1	1.93

Results

Activation Laboratories Ltd.

Report: A17-07189

Analyte Symbol	Au	Pd	Pt	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na
Unit Symbol	ppb	ppb	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%
Lower Limit	2	5	5	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01
Method Code	FA-ICP	FA-ICP	FA-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
494043	< 2	13	12	< 0.3	6.73	< 3	337	< 1	< 2	5.44	0.5	56	23	127	9.87	16	< 1	1.14	4.22	25	1530	< 1	2.17
494044	91	556	413	0.8	2.69	181	88	< 1	< 2	3.09	0.8	193	2190	2690	10.5	5	< 1	0.17	13.5	26	1320	< 1	0.07

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
494001	794	0.007	< 3	< 5	0.44	12	150	< 2	0.08	< 5	< 10	56	< 5	3	99	11
494002	615	0.007	< 3	< 5	0.47	6	287	< 2	0.06	< 5	< 10	33	< 5	2	71	9
494003	550	0.017	< 3	< 5	0.60	11	344	< 2	0.16	< 5	< 10	74	< 5	7	56	27
494004	798	0.008	< 3	< 5	0.64	8	328	< 2	0.07	< 5	< 10	41	< 5	3	95	12
494005	783	0.008	< 3	< 5	0.95	8	266	< 2	0.08	< 5	< 10	48	< 5	3	85	11
494006	581	0.010	< 3	< 5	0.51	11	255	< 2	0.10	< 5	< 10	62	< 5	5	64	14
494007	871	0.007	< 3	< 5	0.87	7	273	< 2	0.07	< 5	< 10	40	< 5	3	59	9
494008	776	0.013	< 3	< 5	0.85	11	286	4	0.09	< 5	< 10	51	< 5	6	56	19
494009	555	0.005	< 3	< 5	0.25	4	277	< 2	0.04	< 5	< 10	24	< 5	2	56	7
494010	656	0.015	< 3	< 5	0.51	18	233	< 2	0.25	< 5	< 10	140	< 5	7	59	22
494011	748	0.009	< 3	< 5	0.39	8	310	3	0.08	< 5	< 10	45	< 5	3	80	14
494012	545	0.008	< 3	< 5	0.16	16	200	< 2	0.11	< 5	< 10	76	< 5	4	63	14
494013	669	0.028	< 3	< 5	0.32	13	304	< 2	0.13	< 5	< 10	69	< 5	10	63	42
494014	429	0.060	< 3	< 5	0.36	20	249	3	0.28	< 5	< 10	109	< 5	25	59	109
494015	942	0.008	< 3	< 5	0.46	13	301	< 2	0.09	< 5	< 10	58	< 5	4	58	13
494016	640	0.010	< 3	< 5	0.24	13	189	< 2	0.16	< 5	< 10	76	< 5	4	79	13
494017	3820	0.025	< 3	< 5	1.72	18	29	< 2	0.29	< 5	< 10	126	< 5	9	83	23
494018	84	0.027	< 3	< 5	0.02	42	201	< 2	0.36	< 5	< 10	216	< 5	18	81	43
494019	390	0.007	< 3	< 5	0.06	31	69	< 2	0.14	< 5	< 10	114	< 5	5	89	12
494020	590	0.007	< 3	< 5	0.18	36	90	< 2	0.14	< 5	< 10	126	< 5	6	74	11
494021	767	0.006	< 3	< 5	0.20	30	85	< 2	0.12	< 5	< 10	105	< 5	4	77	11
494022	1020	0.004	< 3	< 5	0.50	22	186	< 2	0.08	< 5	< 10	74	< 5	3	67	6
494023	1160	0.014	< 3	< 5	0.76	30	124	< 2	0.22	< 5	< 10	132	< 5	8	72	25
494024	894	0.004	< 3	< 5	0.73	27	250	< 2	0.10	< 5	< 10	93	< 5	5	53	8
494025	842	0.005	< 3	< 5	0.70	21	245	< 2	0.09	< 5	< 10	85	< 5	4	62	8
494026	716	0.005	< 3	< 5	0.22	35	26	< 2	0.14	< 5	< 10	126	< 5	5	81	10
494027	417	0.007	< 3	< 5	0.13	37	95	< 2	0.16	< 5	< 10	139	< 5	6	69	14
494028	925	0.010	< 3	< 5	0.50	38	58	< 2	0.16	< 5	< 10	137	< 5	6	84	15
494029	441	0.006	< 3	< 5	0.13	37	143	< 2	0.14	< 5	< 10	128	< 5	7	65	10
494030	321	0.006	< 3	< 5	0.10	35	269	< 2	0.13	< 5	< 10	124	< 5	7	52	13
494031	66	0.030	< 3	< 5	0.02	40	194	< 2	0.34	< 5	< 10	238	< 5	18	77	49
494032	3750	0.025	< 3	< 5	1.68	18	29	< 2	0.31	< 5	< 10	127	< 5	9	83	23
494033	707	0.008	< 3	< 5	0.40	13	295	< 2	0.09	< 5	< 10	102	< 5	6	97	14
494034	83	0.043	< 3	< 5	0.36	41	211	< 2	0.28	< 5	< 10	252	< 5	27	66	32
494035	1070	0.005	< 3	< 5	0.51	7	260	< 2	0.06	< 5	< 10	52	< 5	3	121	9
494036	550	0.007	< 3	< 5	0.16	14	271	< 2	0.09	< 5	< 10	60	< 5	4	107	13
494037	373	0.007	< 3	< 5	0.06	12	268	< 2	0.09	< 5	< 10	53	< 5	4	98	15
494038	1070	0.007	8	< 5	0.49	9	323	< 2	0.08	< 5	< 10	50	< 5	3	164	10
494039	1290	0.006	9	< 5	0.45	8	339	< 2	0.07	< 5	< 10	43	< 5	3	154	9
494040	654	0.005	3	< 5	0.15	7	337	< 2	0.06	< 5	< 10	40	< 5	2	119	7
494041	631	0.007	7	< 5	0.15	9	256	< 2	0.09	< 5	< 10	52	< 5	3	139	13
494042	144	0.031	< 3	< 5	0.03	36	187	< 2	0.26	< 5	< 10	169	< 5	18	80	46

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
494043	76	0.028	< 3	< 5	0.02	46	153	< 2	0.46	< 5	< 10	261	< 5	18	92	45
494044	3710	0.025	< 3	< 5	1.66	18	28	< 2	0.33	< 5	< 10	128	< 5	9	82	24

Analyte Symbol	Au	Pd	Pt	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na
Unit Symbol	ppb	ppb	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%
Lower Limit	2	5	5	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01
Method Code	FA-ICP	FA-ICP	FA-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
GXR-1 Meas				32.5	2.13	445	646	1	1390	0.92	4.1	8	16	1200	24.4	16	3	0.05	0.22	9	926	16	0.05
GXR-1 Cert				31.0	3.52	427	750	1.22	1380	0.960	3.30	8.20	12.0	1110	23.6	13.8	3.90	0.050	0.217	8.20	852	18.0	0.0520
GXR-4 Meas				3.4	6.31	106	117	2	30	1.07	0.4	15	48	6600	3.19	17	< 1	3.09	1.72	11	169	343	0.54
GXR-4 Cert				4.0	7.20	98.0	1640	1.90	19.0	1.01	0.860	14.6	64.0	6520	3.09	20.0	0.110	4.01	1.66	11.1	155	310	0.564
SDC-1 Meas					8.06	13	674	3		1.12		19	54	32	4.79	22	< 1	1.64	1.02	35	886		1.59
SDC-1 Cert					8.34	0.220	630	3.00		1.00		18.0	64.00	30.000	4.82	21.00	0.20	2.72	1.02	34	880.00		1.52
GXR-6 Meas				0.3	12.6	230	> 1000	1	< 2	0.19	0.5	15	51	69	5.63	30	< 1	1.38	0.62	35	1080	< 1	0.10
GXR-6 Cert				1.30	17.7	330	1300	1.40	0.290	0.180	1.00	13.8	96.0	66.0	5.58	35.0	0.0680	1.87	0.609	32.0	1010	2.40	0.104
DNC-1a Meas							103					55	132	93		13				5			
DNC-1a Cert							118					57	270	100		15				5.2			
PK2 Meas	4590	5790	4710																				
PK2 Cert	4790	5918.0 00	4749.0 00																				
SBC-1 Meas						27	287	3	< 2		0.5	23	83	32		27					164		2
SBC-1 Cert						25.7	788.0	3.20	0.70		0.40	22.7	109	31.0000		27.0					163		2
SdAR-M2 (U.S.G.S.) Meas							> 1000	8	< 2		5.9	14	44	244		17	< 1				18		12
SdAR-M2 (U.S.G.S.) Cert							990	6.6	1.05		5.1	12.4	49.6	236.00 00		17.6	1.44				18		13
CDN-PGMS-27 Meas	5230	2030	1290																				
CDN-PGMS-27 Cert	4800	2000	1290.00																				
494005 Orig	257	887	240																				
494005 Dup	197	922	225																				
494015 Orig	100	733	259																				
494015 Dup	88	741	260																				
494025 Orig	111	539	174																				
494025 Dup	107	554	176																				
494036 Orig				0.4	10.8	< 3	174	< 1	< 2	6.12	0.9	62	195	1020	6.86	16	< 1	0.54	4.54	31	1040	< 1	1.88
494036 Dup				0.4	10.5	< 3	177	< 1	< 2	6.20	0.8	62	211	1000	6.94	16	< 1	0.53	4.58	32	1050	< 1	1.91
494038 Orig				1.3	10.0	< 3	200	< 1	< 2	6.00	1.7	86	189	2880	6.59	14	< 1	0.62	4.45	41	955	< 1	1.87
494038 Dup				1.2	8.88	< 3	198	< 1	< 2	6.01	2.0	89	314	2990	6.66	14	< 1	0.55	4.43	41	976	< 1	1.89
494040 Orig	31	695	200																				
494040 Dup	33	691	201																				
494043 Orig	< 2	13	12	< 0.3	6.73	< 3	337	< 1	< 2	5.44	0.5	56	23	127	9.87	16	< 1	1.14	4.22	25	1530	< 1	2.17
494043 Split PREP DUP	< 2	12	11	< 0.3	6.61	< 3	300	< 1	< 2	5.43	0.3	57	25	119	9.69	15	< 1	0.93	4.17	25	1500	< 1	2.18
Method Blank				< 0.3	< 0.01	< 3	< 7	< 1	< 2	< 0.01	< 0.3	< 1		< 1	< 0.01	< 1	< 1	< 0.01	< 0.01	< 1		< 1	< 0.01
Method Blank				< 0.3	< 0.01	< 3	< 7	< 1	< 2	< 0.01	< 0.3	< 1		1	< 0.01	< 1	< 1	< 0.01	< 0.01	< 1		< 1	< 0.01
Method Blank				< 0.3	< 0.01	< 3	< 7	< 1	< 2	< 0.01	< 0.3	< 1		1	< 0.01	< 1	< 1	< 0.01	< 0.01	< 1		< 1	< 0.01
Method Blank	< 2	< 5	< 5																				
Method Blank	< 2	< 5	< 5																				

Analyte Symbol	Au	Pd	Pt	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na
Unit Symbol	ppb	ppb	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%
Lower Limit	2	5	5	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01
Method Code	FA-ICP	FA-ICP	FA-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
Method Blank	< 2	< 5	< 5																				

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
GXR-1 Meas	44	0.059	760	27	0.26	< 4	296	< 2	0.03	< 5	40	90	166	34	765	10
GXR-1 Cert	41.0	0.0650	730	122	0.257	1.58	275	13.0	0.036	0.390	34.9	80.0	164	32.0	760	38.0
GXR-4 Meas	46	0.134	53	< 5	1.81	8	216	< 2	0.30	< 5	< 10	89	39	17	74	38
GXR-4 Cert	42.0	0.120	52.0	4.80	1.77	7.70	221	0.970	0.29	3.20	6.20	87.0	30.8	14.0	73.0	186
SDC-1 Meas	38	0.054	21	< 5		17	178		0.13	< 5	< 10	35	< 5		99	26
SDC-1 Cert	38.0	0.0690	25.00	0.54		17.00	180.00		0.606	0.70	3.10	102.00	0.80		103.00	290.00
GXR-6 Meas	28	0.034	96	< 5	0.01	30	43	< 2		< 5	< 10	111	< 5	16	130	63
GXR-6 Cert	27.0	0.0350	101	3.60	0.0160	27.6	35.0	0.0180		2.20	1.54	186	1.90	14.0	118	110
DNC-1a Meas	254		< 3	< 5		31	131		0.29			139		18	56	34
DNC-1a Cert	247		6.3	0.96		31	144		0.29			148		18.0	70	38.0
PK2 Meas																
PK2 Cert																
SBC-1 Meas	90		28	< 5		22	179		0.49	< 5	< 10	216	< 5	38	175	107
SBC-1 Cert	83		35.0	1.01		20.0	178.0		0.51	0.89	5.76	220.0	1.60	36.5	186	134.0
SdAR-M2 (U.S.G.S.) Meas	55		817			5	146				< 10	26	9	30	780	96
SdAR-M2 (U.S.G.S.) Cert	49		808			4.1	144				2.53	25.2	2.8	32.7	760	259
CDN-PGMS-27 Meas																
CDN-PGMS-27 Cert																
494005 Orig																
494005 Dup																
494015 Orig																
494015 Dup																
494025 Orig																
494025 Dup																
494036 Orig	546	0.007	< 3	< 5	0.16	14	267	< 2	0.09	< 5	< 10	59	< 5	4	108	13
494036 Dup	555	0.008	3	< 5	0.16	14	275	< 2	0.09	< 5	< 10	61	< 5	4	107	13
494038 Orig	1060	0.007	8	< 5	0.49	10	318	< 2	0.08	< 5	< 10	50	< 5	3	165	10
494038 Dup	1080	0.007	8	< 5	0.50	8	328	< 2	0.08	< 5	< 10	51	< 5	2	162	10
494040 Orig																
494040 Dup																
494043 Orig	76	0.028	< 3	< 5	0.02	46	153	< 2	0.46	< 5	< 10	261	< 5	18	92	45
494043 Split PREP DUP	75	0.028	< 3	< 5	0.02	45	150	< 2	0.36	< 5	< 10	233	< 5	18	91	44
Method Blank	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	2	< 0.01	< 5	< 10	< 2	< 5	< 1	< 1	6
Method Blank	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	2	< 0.01	< 5	< 10	< 2	< 5	< 1	< 1	< 5
Method Blank	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	5	< 0.01	< 5	< 10	< 2	< 5	< 1	< 1	< 5
Method Blank																
Method Blank																
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Invoice Date: 13-Sep-17
Your Reference: EAST BULL

Pavey Ark Minerals Inc.
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Ancaster ON L9G 3R8
Canada

ATTN: Richard H. Sutcliffe

CERTIFICATE OF ANALYSIS

20 Rock samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1C-OES 50g Fire Assay ICPOES

Code 1F2 Total Digestion ICP(TOTAL)

REPORT **A17-09013**

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Notes:

Values which exceed the upper limit should be assayed for accurate numbers.

CERTIFIED BY:

A handwritten signature in black ink, appearing to be "Emmanuel Esemé", written over a horizontal line.

Emmanuel Esemé , Ph.D.
Quality Control

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Analyte Symbol	Au	Pd	Pt	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na
Unit Symbol	ppb	ppb	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%
Lower Limit	2	5	5	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01
Method Code	FA-ICP	FA-ICP	FA-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
494045	42	480	102	0.5	9.64	< 3	208	< 1	< 2	6.06	0.7	78	32	1420	7.09	15	< 1	0.78	5.35	35	1090	< 1	1.35
494046	12	77	19	< 0.3	8.63	< 3	217	< 1	< 2	7.03	0.4	45	41	517	6.83	17	2	0.51	3.17	19	1030	< 1	1.49
494047	5	23	63	< 0.3	7.17	< 3	178	< 1	2	7.04	< 0.3	45	75	223	6.83	20	< 1	0.46	2.63	22	983	< 1	1.39
494048	< 2	< 5	< 5	< 0.3	11.2	< 3	164	< 1	< 2	7.67	< 0.3	44	70	46	4.67	19	2	0.59	3.31	24	731	< 1	1.73
494049	4	85	12	< 0.3	10.6	3	168	< 1	< 2	7.48	< 0.3	44	50	102	5.28	19	< 1	0.59	3.22	22	826	< 1	1.69
494050	4	9	5	< 0.3	7.58	< 3	215	< 1	< 2	7.25	< 0.3	48	105	65	7.02	18	1	0.53	4.05	25	1090	< 1	1.14
494051	6	20	10	< 0.3	7.99	< 3	137	< 1	< 2	6.76	< 0.3	50	96	146	6.96	16	1	0.64	4.54	28	1120	< 1	1.50
494052	14	167	54	< 0.3	9.79	< 3	127	< 1	< 2	6.77	0.4	58	32	384	6.21	17	1	0.53	4.03	21	953	< 1	1.60
494053	24	233	79	0.3	10.3	< 3	109	< 1	< 2	6.62	0.6	66	28	812	6.61	17	1	0.46	4.24	23	963	< 1	1.64
494054	14	116	35	< 0.3	10.0	< 3	92	< 1	< 2	7.09	0.4	72	69	635	6.13	18	< 1	0.33	4.07	19	855	< 1	1.87
494055	32	313	91	0.3	10.2	< 3	93	< 1	< 2	5.44	0.6	81	112	1050	6.60	16	1	0.41	4.53	28	955	< 1	2.22
494056	50	664	218	0.5	7.97	< 3	57	< 1	< 2	5.77	0.7	74	225	1230	6.73	14	1	0.22	5.20	22	1110	< 1	1.89
494057	27	407	152	< 0.3	8.28	< 3	50	< 1	< 2	5.31	0.6	71	84	543	7.45	14	< 1	0.20	6.03	28	1220	< 1	1.83
494058	9	39	22	< 0.3	8.07	< 3	63	< 1	< 2	6.56	0.4	60	192	439	6.21	16	2	0.30	4.48	23	1060	< 1	1.93
494059	69	637	287	0.7	9.15	< 3	55	< 1	< 2	6.23	1.2	106	128	1570	7.47	15	< 1	0.26	5.49	26	1040	< 1	1.45
494060	51	465	217	< 0.3	8.86	< 3	60	< 1	< 2	6.87	0.6	81	128	802	6.68	16	< 1	0.27	5.20	21	1010	< 1	1.44
494061	18	362	140	< 0.3	9.23	< 3	64	< 1	< 2	6.99	< 0.3	66	88	368	5.95	15	< 1	0.28	5.08	20	987	< 1	1.72
494062	7	82	47	< 0.3	8.56	< 3	67	< 1	< 2	7.67	< 0.3	51	77	130	5.57	14	< 1	0.28	5.21	17	1040	< 1	1.55
494063	4	18	17	< 0.3	7.01	9	514	< 1	2	5.70	0.4	51	17	110	8.94	17	< 1	0.78	3.62	20	1410	< 1	2.09
494064	67	647	481	0.8	2.57	188	85	< 1	< 2	3.10	0.7	199	2140	2700	10.6	7	2	0.15	13.4	27	1310	< 1	0.06

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
494045	381	0.008	< 3	< 5	0.21	7	294	< 2	0.09	< 5	< 10	44	< 5	4	84	13
494046	153	0.035	4	< 5	0.10	25	252	2	0.31	< 5	< 10	138	< 5	16	59	57
494047	81	0.048	< 3	< 5	0.05	17	259	< 2	0.46	< 5	< 10	179	< 5	16	52	66
494048	124	0.011	< 3	< 5	< 0.01	8	279	< 2	0.12	< 5	< 10	57	< 5	5	45	15
494049	128	0.014	< 3	< 5	0.01	13	305	< 2	0.15	< 5	< 10	74	< 5	7	45	21
494050	99	0.026	< 3	< 5	0.02	35	210	< 2	0.29	< 5	< 10	173	< 5	15	57	43
494051	141	0.022	< 3	< 5	0.03	31	214	< 2	0.26	< 5	< 10	156	< 5	12	62	35
494052	199	0.015	< 3	< 5	0.13	15	254	< 2	0.19	< 5	< 10	98	< 5	7	66	23
494053	258	0.009	< 3	< 5	0.21	10	243	2	0.11	< 5	< 10	54	< 5	4	78	14
494054	217	0.012	< 3	< 5	0.37	12	216	< 2	0.13	< 5	< 10	71	< 5	5	65	19
494055	299	0.008	< 3	< 5	0.39	11	188	< 2	0.09	< 5	< 10	55	< 5	3	79	11
494056	336	0.008	< 3	< 5	0.31	21	146	< 2	0.11	< 5	< 10	85	12	4	87	12
494057	304	0.018	37	< 5	0.07	18	119	< 2	0.19	< 5	< 10	94	< 5	8	153	30
494058	196	0.010	4	< 5	0.13	14	182	3	0.13	< 5	< 10	82	< 5	4	74	17
494059	445	0.007	< 3	< 5	0.53	7	174	< 2	0.08	< 5	< 10	61	< 5	2	101	8
494060	398	0.006	< 3	< 5	0.35	21	182	3	0.11	< 5	< 10	108	< 5	4	75	10
494061	287	0.004	< 3	< 5	0.20	23	191	< 2	0.09	< 5	< 10	85	< 5	3	69	7
494062	205	0.005	< 3	< 5	0.10	33	195	< 2	0.11	< 5	< 10	113	< 5	4	73	20
494063	64	0.029	55	< 5	0.03	42	193	< 2	0.46	< 5	< 10	263	< 5	17	75	54
494064	3700	0.025	5	< 5	1.67	18	27	< 2	0.31	< 5	< 10	127	< 5	8	79	26

Analyte Symbol	Au	Pd	Pt	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na
Unit Symbol	ppb	ppb	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%
Lower Limit	2	5	5	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01
Method Code	FA-ICP	FA-ICP	FA-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
GXR-1 Meas				31.5	2.08	415	667	1	1390	0.89	3.6	7	15	1150	23.9	16	7	0.04	0.21	8	863	14	0.05
GXR-1 Cert				31.0	3.52	427	750	1.22	1380	0.960	3.30	8.20	12.0	1110	23.6	13.8	3.90	0.050	0.217	8.20	852	18.0	0.0520
GXR-1 Meas				31.5	1.86	426	648	1	1390	0.87	3.0	8	31	1140	23.8	12	< 1	0.04	0.21	8	900	15	0.04
GXR-1 Cert				31.0	3.52	427	750	1.22	1380	0.960	3.30	8.20	12.0	1110	23.6	13.8	3.90	0.050	0.217	8.20	852	18.0	0.0520
GXR-1 Meas				31.1	2.00	424	641	1	1390	0.87	3.4	8	17	1140	23.9	14	3	0.04	0.21	8	879	14	0.04
GXR-1 Cert				31.0	3.52	427	750	1.22	1380	0.960	3.30	8.20	12.0	1110	23.6	13.8	3.90	0.050	0.217	8.20	852	18.0	0.0520
DH-1a Meas																							
DH-1a Cert																							
DH-1a Meas																							
DH-1a Cert																							
DH-1a Meas																							
DH-1a Cert																							
GXR-4 Meas				3.5	6.19	102	216	2	11	1.09	0.4	16	51	6560	3.08	17	< 1	2.15	1.71	12	154	334	0.54
GXR-4 Cert				4.0	7.20	98.0	1640	1.90	19.0	1.01	0.860	14.6	64.0	6520	3.09	20.0	0.110	4.01	1.66	11.1	155	310	0.564
GXR-4 Meas				3.5	5.77	100	104	2	11	1.05	0.4	15	46	6490	3.09	16	< 1	3.98	1.68	11	151	316	0.52
GXR-4 Cert				4.0	7.20	98.0	1640	1.90	19.0	1.01	0.860	14.6	64.0	6520	3.09	20.0	0.110	4.01	1.66	11.1	155	310	0.564
GXR-4 Meas				3.5	5.95	104	189	2	11	1.05	0.3	15	44	6480	3.12	17	< 1	4.13	1.70	11	147	318	0.52
GXR-4 Cert				4.0	7.20	98.0	1640	1.90	19.0	1.01	0.860	14.6	64.0	6520	3.09	20.0	0.110	4.01	1.66	11.1	155	310	0.564
SDC-1 Meas				7.59	< 3	630	3		1.07		19	44	31	4.63	21	< 1	1.27	0.97	34	858			1.53
SDC-1 Cert				8.34	0.220	630	3.00		1.00		18.0	64.00	30.000	4.82	21.00	0.20	2.72	1.02	34	880.00			1.52
SDC-1 Meas				7.51	< 3	630	3		1.07		19	49	30	4.78	21	< 1	1.52	1.00	34	887			1.51
SDC-1 Cert				8.34	0.220	630	3.00		1.00		18.0	64.00	30.000	4.82	21.00	0.20	2.72	1.02	34	880.00			1.52
SDC-1 Meas				7.62	< 3	647	3		1.09		19	44	32	4.88	21	< 1	2.29	1.02	35	886			1.53
SDC-1 Cert				8.34	0.220	630	3.00		1.00		18.0	64.00	30.000	4.82	21.00	0.20	2.72	1.02	34	880.00			1.52
GXR-6 Meas				< 0.3	11.4	247	> 1000	1	< 2	0.17	< 0.3	15	51	67	5.63	28	< 1	1.00	0.60	32	1070	1	0.09
GXR-6 Cert				1.30	17.7	330	1300	1.40	0.290	0.180	1.00	13.8	96.0	66.0	5.58	35.0	0.0680	1.87	0.609	32.0	1010	2.40	0.104
GXR-6 Meas				0.4	11.9	248	> 1000	1	< 2	0.17	0.3	15	51	68	5.75	27	< 1	1.85	0.61	33	1080	< 1	0.09
GXR-6 Cert				1.30	17.7	330	1300	1.40	0.290	0.180	1.00	13.8	96.0	66.0	5.58	35.0	0.0680	1.87	0.609	32.0	1010	2.40	0.104
DNC-1a Meas							100					56	160	96		13				5			
DNC-1a Cert							118					57	270	100		15				5.2			
DNC-1a Meas							95					55	138	94		12				5			
DNC-1a Cert							118					57	270	100		15				5.2			
DNC-1a Meas							97					56	127	94		13				5			
DNC-1a Cert							118					57	270	100		15				5.2			
PK2 Meas	4860	5900	4840																				
PK2 Cert	4790	5918.00	4749.00																				
PK2 Meas	4930	5950	4800																				
PK2 Cert	4790	5918.00	4749.00																				
PK2 Meas	4890	6030	4770																				
PK2 Cert	4790	5918.00	4749.00																				

Analyte Symbol	Au	Pd	Pt	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na
Unit Symbol	ppb	ppb	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%
Lower Limit	2	5	5	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01
Method Code	FA-ICP	FA-ICP	FA-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
PK2 Meas	5060	6170	4950																				
PK2 Cert	4790	5918.0 00	4749.0 00																				
PK2 Meas	4790	5850	4620																				
PK2 Cert	4790	5918.0 00	4749.0 00																				
PK2 Meas	5080	6140	4960																				
PK2 Cert	4790	5918.0 00	4749.0 00																				
PK2 Meas	4940	6030	4700																				
PK2 Cert	4790	5918.0 00	4749.0 00																				
SBC-1 Meas						27	686	3	2		0.4	24	72	36		26					163		3
SBC-1 Cert						25.7	788.0	3.20	0.70		0.40	22.7	109			27.0					163		2
SBC-1 Meas						25	613	3	< 2		0.5	24	94	32		27					165		1
SBC-1 Cert						25.7	788.0	3.20	0.70		0.40	22.7	109			27.0					163		2
SBC-1 Meas						19	536	3	< 2		0.4	23	75	29		25					157		1
SBC-1 Cert						25.7	788.0	3.20	0.70		0.40	22.7	109			27.0					163		2
OREAS 45d (4-Acid) Meas					7.39	< 3	181	< 1	< 2	0.20		32	517	367	13.9	22		0.39	0.24	21	503	< 1	0.10
OREAS 45d (4-Acid) Cert					8.150	13.8	183.0	0.79	0.31	0.185		29.50	549	371	14.5	21.20		0.412	0.245	21.5	490.000	2.500	0.101
OREAS 45d (4-Acid) Meas					7.36	7	180	< 1	< 2	0.20		33	549	375	14.2	22		0.40	0.24	21	517	< 1	0.09
OREAS 45d (4-Acid) Cert					8.150	13.8	183.0	0.79	0.31	0.185		29.50	549	371	14.5	21.20		0.412	0.245	21.5	490.000	2.500	0.101
OREAS 45d (4-Acid) Meas					7.51	< 3	186	< 1	< 2	0.20		34	517	377	14.6	22		0.40	0.25	21	522	< 1	0.10
OREAS 45d (4-Acid) Cert					8.150	13.8	183.0	0.79	0.31	0.185		29.50	549	371	14.5	21.20		0.412	0.245	21.5	490.000	2.500	0.101
SdAR-M2 (U.S.G.S.) Meas							971	7	< 2		5.4	14	44	234		17	1			17			13
SdAR-M2 (U.S.G.S.) Cert							990	6.6	1.05		5.1	12.4	49.6	236.00 00		17.6	1.44			18			13
SdAR-M2 (U.S.G.S.) Meas							> 1000	8	< 2		5.5	15	37	244		17	< 1			18			12
SdAR-M2 (U.S.G.S.) Cert							990	6.6	1.05		5.1	12.4	49.6	236.00 00		17.6	1.44			18			13
SdAR-M2 (U.S.G.S.) Meas							> 1000	8	< 2		5.3	15	35	250		17	< 1			18			13
SdAR-M2 (U.S.G.S.) Cert							990	6.6	1.05		5.1	12.4	49.6	236.00 00		17.6	1.44			18			13
CDN-PGMS-27 Meas	5090	2050	1300																				

Analyte Symbol	Au	Pd	Pt	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na
Unit Symbol	ppb	ppb	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%
Lower Limit	2	5	5	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01
Method Code	FA-ICP	FA-ICP	FA-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
CDN-PGMS-27 Cert	4800	2000	1290.00																				
CDN-PGMS-27 Meas	4720	1990	1250																				
CDN-PGMS-27 Cert	4800	2000	1290.00																				
CDN-PGMS-27 Meas	4980	2050	1290																				
CDN-PGMS-27 Cert	4800	2000	1290.00																				
CDN-PGMS-27 Meas	4880	1990	1220																				
CDN-PGMS-27 Cert	4800	2000	1290.00																				
494055 Orig	37	322	93																				
494055 Dup	28	304	89																				
494062 Orig	7	82	46																				
494062 Dup	8	82	47																				
Method Blank				< 0.3	< 0.01	< 3	< 7	< 1	< 2	< 0.01	< 0.3	< 1		< 1	< 0.01	< 1	< 1	< 0.01	< 0.01	< 1		< 1	< 0.01
Method Blank				< 0.3	< 0.01	< 3	< 7	< 1	< 2	< 0.01	< 0.3	< 1		< 1	< 0.01	< 1	< 1	< 0.01	< 0.01	< 1		< 1	< 0.01
Method Blank				< 0.3	0.02	< 3	< 7	< 1	< 2	< 0.01	< 0.3	< 1	2	< 1	< 0.01	< 1	< 1	< 0.01	< 0.01	< 1		< 1	< 0.01
Method Blank				< 0.3	< 0.01	< 3	< 7	< 1	< 2	< 0.01	< 0.3	< 1		< 1	< 0.01	< 1	< 1	< 0.01	< 0.01	< 1		< 1	< 0.01
Method Blank				< 0.3	< 0.01	< 3	< 7	< 1	< 2	< 0.01	< 0.3	< 1		< 1	< 0.01	< 1	< 1	< 0.01	< 0.01	< 1		< 1	< 0.01
Method Blank				< 0.3	0.02	< 3	< 7	< 1	< 2	< 0.01	< 0.3	< 1		< 1	< 0.01	< 1	< 1	< 0.01	< 0.01	< 1		< 1	< 0.01
Method Blank				< 0.3	0.02	< 3	< 7	< 1	< 2	< 0.01	< 0.3	< 1		< 1	< 0.01	< 1	1	< 0.01	< 0.01	< 1		< 1	< 0.01
Method Blank				< 0.3	0.01	< 3	< 7	< 1	< 2	< 0.01	< 0.3	< 1		< 1	< 0.01	< 1	< 1	< 0.01	< 0.01	< 1		< 1	< 0.01
Method Blank				< 0.3	< 0.01	< 3	< 7	< 1	< 2	< 0.01	< 0.3	< 1		2	< 0.01	< 1	< 1	< 0.01	< 0.01	< 1		< 1	< 0.01
Method Blank	< 2	< 5	< 5																				
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Method Blank				< 0.3	< 0.01	< 3	< 7	< 1	< 2	< 0.01	< 0.3	< 1		< 1	< 0.01	< 1	< 1	< 0.01	< 0.01	< 1		< 1	< 0.01

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
GXR-1 Meas	45	0.058	740	38	0.25	< 4	287	16	0.03	< 5	30	87	135	32	730	17
GXR-1 Cert	41.0	0.0650	730	122	0.257	1.58	275	13.0	0.036	0.390	34.9	80.0	164	32.0	760	38.0
GXR-1 Meas	42	0.059	724	30	0.25	< 4	283	13	0.02	< 5	40	88	161	32	734	15
GXR-1 Cert	41.0	0.0650	730	122	0.257	1.58	275	13.0	0.036	0.390	34.9	80.0	164	32.0	760	38.0
GXR-1 Meas	42	0.058	721	34	0.25	< 4	281	15	0.03	< 5	40	88	157	33	733	21
GXR-1 Cert	41.0	0.0650	730	122	0.257	1.58	275	13.0	0.036	0.390	34.9	80.0	164	32.0	760	38.0
DH-1a Meas											2490					
DH-1a Cert											2629					
DH-1a Meas											2480					
DH-1a Cert											2629					
DH-1a Meas											2570					
DH-1a Cert											2629					
GXR-4 Meas	42	0.133	49	< 5	1.84	8	217	3	0.29	< 5	< 10	90	31	16	73	48
GXR-4 Cert	42.0	0.120	52.0	4.80	1.77	7.70	221	0.970	0.29	3.20	6.20	87.0	30.8	14.0	73.0	186
GXR-4 Meas	42	0.132	42	< 5	1.82	8	214	< 2	0.29	< 5	< 10	89	34	16	70	36
GXR-4 Cert	42.0	0.120	52.0	4.80	1.77	7.70	221	0.970	0.29	3.20	6.20	87.0	30.8	14.0	73.0	186
GXR-4 Meas	43	0.131	42	< 5	1.84	8	219	< 2	0.30	< 5	< 10	89	36	17	72	40
GXR-4 Cert	42.0	0.120	52.0	4.80	1.77	7.70	221	0.970	0.29	3.20	6.20	87.0	30.8	14.0	73.0	186
SDC-1 Meas	38	0.053	21	< 5		16	172		0.17	< 5	< 10	44	< 5		98	34
SDC-1 Cert	38.0	0.0690	25.00	0.54		17.00	180.00		0.606	0.70	3.10	102.00	0.80		103.00	290.00
SDC-1 Meas	36	0.055	23	< 5		17	175		0.20	< 5	< 10	55	< 5		99	36
SDC-1 Cert	38.0	0.0690	25.00	0.54		17.00	180.00		0.606	0.70	3.10	102.00	0.80		103.00	290.00
SDC-1 Meas	37	0.054	22	< 5		17	179		0.20	< 5	< 10	58	< 5		99	36
SDC-1 Cert	38.0	0.0690	25.00	0.54		17.00	180.00		0.606	0.70	3.10	102.00	0.80		103.00	290.00
GXR-6 Meas	27	0.035	96	< 5	0.02	30	37	< 2		< 5	< 10	130	< 5	16	130	66
GXR-6 Cert	27.0	0.0350	101	3.60	0.0160	27.6	35.0	0.0180		2.20	1.54	186	1.90	14.0	118	110
GXR-6 Meas	26	0.034	95	< 5	0.02	31	38	< 2		< 5	< 10	120	< 5	16	131	64
GXR-6 Cert	27.0	0.0350	101	3.60	0.0160	27.6	35.0	0.0180		2.20	1.54	186	1.90	14.0	118	110
DNC-1a Meas	251		3	< 5		31	129		0.27			139		18	53	35
DNC-1a Cert	247		6.3	0.96		31	144		0.29			148		18.0	70	38.0
DNC-1a Meas	252		< 3	< 5		31	128		0.29			138		18	53	33
DNC-1a Cert	247		6.3	0.96		31	144		0.29			148		18.0	70	38.0
DNC-1a Meas	252		< 3	< 5		32	129		0.29			140		18	56	33
DNC-1a Cert	247		6.3	0.96		31	144		0.29			148		18.0	70	38.0
PK2 Meas																
PK2 Cert																
PK2 Meas																
PK2 Cert																
PK2 Meas																
PK2 Cert																
PK2 Meas																
PK2 Cert																

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
PK2 Meas																
PK2 Cert																
PK2 Meas																
PK2 Cert																
PK2 Meas																
PK2 Cert																
SBC-1 Meas	87		28	< 5		21	177		0.48	< 5	< 10	212	< 5	38	169	116
SBC-1 Cert	83		35.0	1.01		20.0	178.0		0.51	0.89	5.76	220.0	1.60	36.5	186	134.0
SBC-1 Meas	90		28	< 5		23	183		0.55	< 5	< 10	223	< 5	40	183	118
SBC-1 Cert	83		35.0	1.01		20.0	178.0		0.51	0.89	5.76	220.0	1.60	36.5	186	134.0
SBC-1 Meas	87		27	< 5		22	174		0.52	< 5	< 10	213	< 5	38	170	112
SBC-1 Cert	83		35.0	1.01		20.0	178.0		0.51	0.89	5.76	220.0	1.60	36.5	186	134.0
OREAS 45d (4-Acid) Meas	250	0.032	21	< 5	0.04	55	31		0.15	< 5	< 10	101	< 5	13	42	58
OREAS 45d (4-Acid) Cert	231.0	0.042	21.8	0.82	0.049	49.30	31.30		0.773	0.27	2.63	235.0	1.62	9.53	45.7	141
OREAS 45d (4-Acid) Meas	252	0.036	18	< 5	0.05	57	32		0.44	< 5	< 10	170	< 5	13	41	105
OREAS 45d (4-Acid) Cert	231.0	0.042	21.8	0.82	0.049	49.30	31.30		0.773	0.27	2.63	235.0	1.62	9.53	45.7	141
OREAS 45d (4-Acid) Meas	254	0.035	18	< 5	0.05	58	32		0.39	< 5	< 10	151	< 5	14	42	96
OREAS 45d (4-Acid) Cert	231.0	0.042	21.8	0.82	0.049	49.30	31.30		0.773	0.27	2.63	235.0	1.62	9.53	45.7	141
SdAR-M2 (U.S.G.S.) Meas	55		801				4	144			< 10	26	9	30	779	102
SdAR-M2 (U.S.G.S.) Cert	49		808				4.1	144			2.53	25.2	2.8	32.7	760	259
SdAR-M2 (U.S.G.S.) Meas	54		818				4	148			< 10	26	9	31	805	111
SdAR-M2 (U.S.G.S.) Cert	49		808				4.1	144			2.53	25.2	2.8	32.7	760	259
SdAR-M2 (U.S.G.S.) Meas	55		819				5	151			< 10	27	10	31	805	111
SdAR-M2 (U.S.G.S.) Cert	49		808				4.1	144			2.53	25.2	2.8	32.7	760	259
CDN-PGMS-27 Meas																
CDN-PGMS-27 Cert																
CDN-PGMS-27 Meas																
CDN-PGMS-27 Cert																
CDN-PGMS-27 Meas																

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
CDN-PGMS-27 Cert																
CDN-PGMS-27 Meas																
CDN-PGMS-27 Cert																
494055 Orig																
494055 Dup																
494062 Orig																
494062 Dup																
Method Blank	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	< 2	< 0.01	< 5	< 10	< 2	< 5	< 1	< 1	< 5
Method Blank	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	< 2	< 0.01	< 5	< 10	< 2	< 5	< 1	< 1	< 5
Method Blank	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	< 2	< 0.01	< 5	< 10	< 2	< 5	< 1	< 1	< 5
Method Blank	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	< 2	< 0.01	< 5	< 10	< 2	< 5	< 1	< 1	< 5
Method Blank	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	< 2	< 0.01	< 5	< 10	< 2	< 5	< 1	1	< 5
Method Blank	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	< 2	< 0.01	< 5	< 10	< 2	< 5	< 1	< 1	< 5
Method Blank	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	< 2	< 0.01	< 5	< 10	< 2	< 5	< 1	< 1	< 5
Method Blank	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	< 2	< 0.01	< 5	< 10	< 2	< 5	< 1	< 1	< 5
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Method Blank	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	< 2	< 0.01	< 5	< 10	< 2	< 5	< 1	< 1	< 5



Date Submitted: 06-Nov-17
Invoice No.: A17-12473
Invoice Date: 11-Dec-17
Your Reference: EAST BULL

Pavey Ark Minerals Inc.
100 Broad Leaf Cresent
Ancaster ON L9G 3R8
Canada

ATTN: Richard H. Sutcliffe

CERTIFICATE OF ANALYSIS

27 Rock samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1C-OES 50g Fire Assay ICPOES

Code 1F2 Total Digestion ICP(TOTAL)

REPORT **A17-12473**

This report may be reproduced without our consent. If only selected portions of the report are reproduced, permission must be obtained. If no instructions were given at time of sample submittal regarding excess material, it will be discarded within 90 days of this report. Our liability is limited solely to the analytical cost of these analyses. Test results are representative only of material submitted for analysis.

Notes:

Values which exceed the upper limit should be assayed for accurate numbers.

CERTIFIED BY:

A handwritten signature in black ink, appearing to read "Emmanuel Esemé". The signature is written over a horizontal line.

Emmanuel Esemé , Ph.D.
Quality Control

ACTIVATION LABORATORIES LTD.
41 Bittern Street, Ancaster, Ontario, Canada, L9G 4V5
TELEPHONE +905 648-9611 or +1.888.228.5227 FAX +1.905.648.9613
E-MAIL Ancaster@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

Results

Activation Laboratories Ltd.

Report: A17-12473

Analyte Symbol	Au	Pd	Pt	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na
Unit Symbol	ppb	ppb	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%
Lower Limit	2	5	5	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01
Method Code	FA-ICP	FA-ICP	FA-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
494065	49	892	246	1.1	9.99	< 3	301	< 1	2	5.67	1.6	76	127	1860	5.98	12	< 1	0.71	5.36	39	883	< 1	1.47
494066	68	1160	331	1.0	10.4	4	414	< 1	< 2	6.03	1.3	68	113	1890	5.54	13	< 1	0.85	5.24	36	809	< 1	1.40
494067	55	1070	301	0.9	9.83	3	287	< 1	< 2	6.12	0.7	77	104	1990	6.15	13	< 1	0.62	5.64	37	867	< 1	1.26
494068	54	1050	268	1.0	10.7	< 3	416	< 1	< 2	5.69	0.8	81	61	2190	5.76	13	< 1	0.84	4.88	41	812	< 1	1.61
494069	63	637	164	0.7	9.88	< 3	184	< 1	< 2	5.81	0.5	82	67	1830	7.03	13	< 1	0.39	5.52	35	980	< 1	1.37
494070	< 2	16	13	< 0.3	7.05	< 3	434	< 1	< 2	5.87	< 0.3	53	60	92	8.44	16	< 1	1.29	3.84	19	1430	< 1	1.75
494071	74	599	469	0.7	2.47	178	75	< 1	< 2	2.86	0.4	185	2420	2420	9.81	5	< 1	0.15	12.3	24	1210	< 1	0.05
494072	4	29	8	< 0.3	10.0	< 3	121	< 1	< 2	7.56	0.3	34	184	181	3.76	18	< 1	0.77	3.06	28	588	< 1	1.79
494073	5	62	16	< 0.3	9.19	< 3	59	< 1	< 2	6.47	< 0.3	48	268	207	5.34	15	< 1	0.22	4.75	26	809	< 1	1.39
494074	5	7	< 5	< 0.3	7.93	3	91	< 1	< 2	7.67	< 0.3	33	154	295	3.39	20	< 1	0.50	2.39	24	500	< 1	1.72
494075	19	170	47	< 0.3	10.5	< 3	151	< 1	< 2	7.76	< 0.3	47	118	555	3.98	20	< 1	0.74	2.65	28	551	< 1	1.73
494076	9	146	34	0.5	13.5	< 3	91	< 1	< 2	8.12	0.4	38	67	643	3.79	20	< 1	0.34	2.21	22	598	< 1	2.34
494077	18	272	71	0.4	12.0	< 3	129	< 1	< 2	7.00	0.6	52	64	745	4.44	19	< 1	0.58	2.94	28	624	< 1	2.08
494078	8	100	29	< 0.3	12.7	6	189	< 1	< 2	7.56	< 0.3	30	58	218	3.18	20	< 1	0.73	2.18	27	527	< 1	2.34
494079	< 2	15	< 5	< 0.3	12.1	3	90	< 1	< 2	6.47	< 0.3	34	53	59	4.00	18	< 1	0.47	3.12	30	664	< 1	2.24
494080	< 2	42	17	< 0.3	11.5	< 3	67	< 1	< 2	6.63	< 0.3	40	59	70	5.45	18	< 1	0.32	3.99	29	847	< 1	1.95
494081	36	705	184	0.7	9.59	< 3	52	< 1	< 2	5.19	0.9	83	89	1190	6.89	15	< 1	0.23	5.26	26	1030	< 1	1.78
494082	2	12	< 5	< 0.3	11.0	< 3	72	< 1	< 2	7.04	< 0.3	46	56	111	5.03	17	< 1	0.34	4.45	26	810	< 1	1.65
494083	97	1110	285	0.7	8.35	4	36	< 1	< 2	5.92	0.9	80	224	1390	7.05	13	< 1	0.18	6.34	25	1090	< 1	1.11
494084	3	74	25	< 0.3	7.39	5	38	< 1	< 2	5.09	< 0.3	59	280	65	6.94	12	< 1	0.14	7.02	26	1270	< 1	0.96
494085	50	939	337	0.5	7.23	< 3	49	< 1	< 2	5.38	1.0	69	338	948	6.95	13	< 1	0.17	6.52	24	1230	< 1	1.06
494086	18	326	121	0.3	6.97	< 3	49	< 1	< 2	5.79	0.6	60	331	723	6.96	11	< 1	0.18	6.18	21	1240	< 1	1.29
494087	91	1730	581	1.5	7.39	< 3	41	< 1	< 2	5.26	2.2	83	224	2390	7.51	13	< 1	0.14	6.07	23	1260	< 1	1.13
494088	71	1790	617	1.3	5.84	< 3	30	< 1	< 2	5.51	2.1	82	219	2180	8.67	11	< 1	0.11	7.07	19	1410	< 1	0.87
494089	73	1780	531	0.9	7.64	< 3	57	< 1	< 2	6.51	2.0	89	222	1620	7.12	13	< 1	0.19	5.27	18	1130	< 1	1.48
494090	2	23	16	< 0.3	7.19	3	429	< 1	< 2	5.82	< 0.3	52	25	110	8.41	16	< 1	1.55	3.83	20	1400	< 1	1.88
494091	72	607	467	0.7	2.58	182	82	< 1	< 2	2.95	0.4	190	1890	2460	10.1	6	< 1	0.16	12.7	24	1250	< 1	0.06

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
494065	959	0.005	4	< 5	0.63	8	277	< 2	0.05	< 5	< 10	37	< 5	2	114	6
494066	927	0.006	< 3	< 5	0.53	8	325	< 2	0.06	< 5	< 10	41	< 5	2	87	7
494067	1070	0.007	5	< 5	0.56	7	256	< 2	0.06	< 5	< 10	39	< 5	3	81	8
494068	1330	0.007	6	< 5	0.56	5	317	< 2	0.06	< 5	< 10	30	< 5	2	83	8
494069	1080	0.007	< 3	< 5	0.37	5	266	< 2	0.06	< 5	< 10	32	< 5	2	85	9
494070	75	0.019	< 3	< 5	0.02	41	181	3	0.31	< 5	< 10	210	< 5	14	85	31
494071	3380	0.024	< 3	< 5	1.61	17	24	< 2	0.29	< 5	< 10	120	< 5	8	75	21
494072	149	0.010	10	< 5	0.06	7	323	< 2	0.10	< 5	< 10	51	< 5	3	62	15
494073	216	0.004	< 3	< 5	0.06	9	199	< 2	0.07	< 5	< 10	45	< 5	2	106	6
494074	139	0.004	< 3	< 5	0.06	< 4	244	< 2	0.06	< 5	< 10	34	< 5	< 1	48	< 5
494075	185	0.006	4	< 5	0.16	< 4	292	3	0.07	< 5	< 10	34	< 5	2	102	8
494076	192	0.006	< 3	< 5	0.18	< 4	331	< 2	0.06	< 5	< 10	29	< 5	2	55	9
494077	234	0.007	< 3	< 5	0.23	6	293	< 2	0.08	< 5	< 10	46	< 5	3	94	8
494078	153	0.005	5	< 5	0.06	5	327	< 2	0.06	< 5	< 10	32	< 5	2	52	6
494079	139	0.004	< 3	< 5	0.01	5	234	< 2	0.06	< 5	< 10	29	< 5	2	112	5
494080	154	0.006	< 3	< 5	< 0.01	5	212	< 2	0.07	< 5	< 10	37	< 5	3	76	9
494081	490	0.008	6	< 5	0.26	10	172	< 2	0.09	< 5	< 10	52	< 5	3	111	11
494082	170	0.004	< 3	< 5	0.02	6	206	< 2	0.06	< 5	< 10	31	< 5	2	71	< 5
494083	405	0.005	< 3	< 5	0.24	14	126	< 2	0.08	< 5	< 10	67	< 5	3	105	7
494084	210	0.005	< 3	< 5	0.01	23	89	< 2	0.10	< 5	< 10	84	< 5	3	105	8
494085	450	0.006	< 3	< 5	0.17	23	108	< 2	0.11	< 5	< 10	88	< 5	3	101	10
494086	320	0.014	3	< 5	0.20	29	113	< 2	0.18	< 5	< 10	124	< 5	7	99	20
494087	821	0.007	< 3	< 5	0.51	23	125	< 2	0.12	< 5	< 10	92	< 5	4	131	10
494088	631	0.017	< 3	< 5	0.54	31	86	< 2	0.19	< 5	< 10	130	< 5	8	125	27
494089	627	0.013	< 3	< 5	0.75	31	158	< 2	0.16	< 5	< 10	132	< 5	8	92	20
494090	75	0.020	< 3	< 5	0.02	41	183	< 2	0.30	< 5	< 10	200	< 5	14	85	31
494091	3470	0.024	< 3	< 5	1.60	17	26	< 2	0.30	< 5	< 10	124	< 5	8	78	23

Analyte Symbol	Au	Pd	Pt	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na
Unit Symbol	ppb	ppb	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%
Lower Limit	2	5	5	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01
Method Code	FA-ICP	FA-ICP	FA-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
GXR-1 Meas				31.8	2.10	449	646	1	1340	0.92	3.2	7	14	1110	23.5	13	3	0.05	0.21	8	893	14	0.04
GXR-1 Cert				31.0	3.52	427	750	1.22	1380	0.960	3.30	8.20	12.0	1110	23.6	13.8	3.90	0.050	0.217	8.20	852	18.0	0.0520
GXR-4 Meas				3.3	6.49	110	92	2	7	1.07	0.4	15	39	6470	3.06	17	< 1	3.34	1.66	11	148	321	0.50
GXR-4 Cert				4.0	7.20	98.0	1640	1.90	19.0	1.01	0.860	14.6	64.0	6520	3.09	20.0	0.110	4.01	1.66	11.1	155	310	0.564
SDC-1 Meas					8.44	< 3	622	3		1.12		20	45	30	5.00	22	< 1	1.27	1.02	35	926		1.54
SDC-1 Cert					8.34	0.220	630	3.00		1.00		18.0	64.00	30.000	4.82	21.00	0.20	2.72	1.02	34	880.00		1.52
GXR-6 Meas				< 0.3	13.3	260	> 1000	1	< 2	0.20	< 0.3	14	52	66	5.63	31	< 1	1.03	0.61	35	1090	< 1	0.10
GXR-6 Cert				1.30	17.7	330	1300	1.40	0.290	0.180	1.00	13.8	96.0	66.0	5.58	35.0	0.0680	1.87	0.609	32.0	1010	2.40	0.104
DNC-1a Meas							94					57	195	94		14				4			
DNC-1a Cert							118					57	270	100		15				5.2			
PK2 Meas	5090	6210	5020																				
PK2 Cert	4790	5918.000	4749.000																				
SBC-1 Meas						27	558	3	< 2		0.3	24	79	35		26					163		3
SBC-1 Cert						25.7	788.0	3.20	0.70		0.40	22.7	109	31.0000		27.0					163		2
SdAR-M2 (U.S.G.S.) Meas							> 1000	8	< 2		5.6	15	29	252		16	< 1				18		11
SdAR-M2 (U.S.G.S.) Cert							990	6.6	1.05		5.1	12.4	49.6	236.0000		17.6	1.44				18		13
CDN-PGMS-28 Meas	195	1840	1560																				
CDN-PGMS-28 Cert	193.000	1750	1510																				
494081 Orig				0.7	9.57	< 3	52	< 1	< 2	5.19	0.7	84	84	1180	6.89	15	< 1	0.23	5.26	26	1040	< 1	1.78
494081 Dup				0.6	9.60	< 3	52	< 1	< 2	5.18	1.2	83	94	1200	6.88	15	< 1	0.23	5.25	26	1030	< 1	1.78
494090 Orig	2	23	16	< 0.3	7.19	3	429	< 1	< 2	5.82	< 0.3	52	25	110	8.41	16	< 1	1.55	3.83	20	1400	< 1	1.88
494090 Split PREP DUP	< 2	33	21	< 0.3	7.14	< 3	422	< 1	< 2	5.81	< 0.3	52	22	126	8.47	16	< 1	1.66	3.87	20	1410	< 1	1.83
494090 Orig	2	26	18																				
494090 Dup	2	20	15																				
494090 Split PREP DUP	< 2	33	21																				
Method Blank				< 0.3	< 0.01	< 3	< 7	< 1	< 2	< 0.01	< 0.3	< 1		< 1	< 0.01	< 1	< 1	< 0.01	< 0.01	< 1		< 1	< 0.01
Method Blank				< 0.3	< 0.01	< 3	< 7	< 1	< 2	< 0.01	< 0.3	< 1		< 1	< 0.01	< 1	< 1	< 0.01	< 0.01	< 1		< 1	< 0.01
Method Blank				< 0.3	< 0.01	< 3	< 7	< 1	< 2	< 0.01	< 0.3	< 1		< 1	< 0.01	< 1	< 1	< 0.01	< 0.01	< 1		< 1	< 0.01
Method Blank				< 0.3	0.01	< 3	< 7	< 1	< 2	< 0.01	< 0.3	< 1		< 1	< 0.01	< 1	< 1	< 0.01	< 0.01	< 1		< 1	< 0.01
Method Blank	< 2	< 5	< 5																				
Method Blank	< 2	< 5	< 5																				

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
GXR-1 Meas	44	0.056	726	27	0.25	< 4	279	18	0.03	< 5	40	87	158	32	726	12
GXR-1 Cert	41.0	0.0650	730	122	0.257	1.58	275	13.0	0.036	0.390	34.9	80.0	164	32.0	760	38.0
GXR-4 Meas	42	0.133	44	< 5	1.80	8	206	3	0.29	< 5	< 10	88	34	16	73	40
GXR-4 Cert	42.0	0.120	52.0	4.80	1.77	7.70	221	0.970	0.29	3.20	6.20	87.0	30.8	14.0	73.0	186
SDC-1 Meas	38	0.057	22	< 5		17	179		0.29	< 5	< 10	67	< 5		101	44
SDC-1 Cert	38.0	0.0690	25.00	0.54		17.00	180.00		0.606	0.70	3.10	102.00	0.80		103.00	290.00
GXR-6 Meas	28	0.034	95	< 5	0.01	30	43	< 2		< 5	< 10	132	< 5	15	130	74
GXR-6 Cert	27.0	0.0350	101	3.60	0.0160	27.6	35.0	0.0180		2.20	1.54	186	1.90	14.0	118	110
DNC-1a Meas	245		< 3	< 5		29	129		0.28			140		18	59	35
DNC-1a Cert	247		6.3	0.96		31	144		0.29			148		18.0	70	38.0
PK2 Meas																
PK2 Cert																
SBC-1 Meas	89		27	< 5		23	179		0.51	< 5	< 10	224	< 5	39	181	118
SBC-1 Cert	83		35.0	1.01		20.0	178.0		0.51	0.89	5.76	220.0	1.60	36.5	186	134.0
SdAR-M2 (U.S.G.S.) Meas	59		823			5	145				< 10	27	8	31	796	66
SdAR-M2 (U.S.G.S.) Cert	49		808			4.1	144				2.53	25.2	2.8	32.7	760	259
CDN-PGMS-28 Meas																
CDN-PGMS-28 Cert																
494081 Orig	491	0.008	6	< 5	0.26	10	171	< 2	0.09	< 5	< 10	52	< 5	3	112	11
494081 Dup	489	0.008	6	< 5	0.26	10	172	< 2	0.09	< 5	< 10	51	< 5	3	110	11
494090 Orig	75	0.020	< 3	< 5	0.02	41	183	< 2	0.30	< 5	< 10	200	< 5	14	85	31
494090 Split PREP DUP	82	0.021	< 3	< 5	0.02	41	181	< 2	0.30	< 5	< 10	199	< 5	14	87	32
494090 Orig																
494090 Dup																
494090 Split PREP DUP																
Method Blank	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	< 2	< 0.01	< 5	< 10	< 2	< 5	< 1	< 1	< 5
Method Blank	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	< 2	< 0.01	< 5	< 10	< 2	< 5	< 1	< 1	< 5
Method Blank	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	< 2	< 0.01	< 5	< 10	< 2	< 5	< 1	< 1	< 5
Method Blank	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	< 2	< 0.01	< 5	< 10	< 2	< 5	< 1	1	< 5
Method Blank																
Method Blank																



Date Submitted: 06-Nov-17
Invoice No.: A17-12475
Invoice Date: 13-Dec-17
Your Reference: EAST BULL

Pavey Ark Minerals Inc.
100 Broad Leaf Cresent
Ancaster ON L9G 3R8
Canada

ATTN: Richard H. Sutcliffe

CERTIFICATE OF ANALYSIS

100 Rock samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1C-OES 50g Fire Assay ICPOES

Code 1F2 Total Digestion ICP(TOTAL)

REPORT **A17-12475**

This report may be reproduced without our consent. If only selected portions of the report are reproduced, permission must be obtained. If no instructions were given at time of sample submittal regarding excess material, it will be discarded within 90 days of this report. Our liability is limited solely to the analytical cost of these analyses. Test results are representative only of material submitted for analysis.

Notes:

Values which exceed the upper limit should be assayed for accurate numbers.

CERTIFIED BY:

A handwritten signature in black ink, appearing to be "Emmanuel Esemé". The signature is written in a cursive style with some loops and is positioned above a horizontal line.

Emmanuel Esemé , Ph.D.
Quality Control

ACTIVATION LABORATORIES LTD.
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Results

Activation Laboratories Ltd.

Report: A17-12475

Analyte Symbol	Au	Pd	Pt	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na
Unit Symbol	ppb	ppb	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%
Lower Limit	2	5	5	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01
Method Code	FA-ICP	FA-ICP	FA-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
677001	41	354	91	0.6	3.41	< 3	< 7	< 1	< 2	5.78	0.6	110	511	1980	8.72	8	2	0.02	10.4	17	1440	< 1	0.08
677002	63	706	297	0.9	4.26	< 3	19	< 1	< 2	5.62	0.6	132	324	2550	8.69	9	1	0.13	8.96	24	1400	< 1	0.43
677003	75	268	63	0.4	7.11	< 3	60	< 1	< 2	4.12	0.4	72	176	1170	7.88	16	1	0.30	6.89	45	1160	< 1	1.25
677004	23	24	6	< 0.3	10.0	< 3	150	< 1	< 2	4.30	< 0.3	44	148	315	5.61	20	< 1	0.85	3.98	32	752	< 1	2.53
677005	8	111	26	< 0.3	9.72	< 3	118	< 1	< 2	4.06	0.3	46	201	418	4.99	17	< 1	0.69	3.90	29	729	< 1	2.98
677006	59	398	113	0.7	4.30	< 3	< 7	< 1	< 2	4.66	0.8	86	472	2030	9.17	10	1	0.03	9.60	24	1540	< 1	0.12
677007	24	259	71	0.4	7.18	< 3	116	< 1	< 2	4.02	0.6	88	248	676	8.31	15	< 1	0.55	6.84	33	1210	< 1	1.43
677008	7	88	29	< 0.3	8.30	< 3	186	< 1	< 2	3.38	0.4	53	96	200	6.55	16	< 1	0.84	4.69	32	912	< 1	2.49
677009	4	64	20	< 0.3	7.76	< 3	94	< 1	< 2	3.50	< 0.3	42	147	304	6.05	13	2	0.39	4.50	40	845	< 1	3.06
677010	54	297	102	< 0.3	5.09	< 3	17	< 1	< 2	3.68	0.3	89	248	1270	9.04	13	< 1	0.07	7.04	39	1220	< 1	0.38
677011	105	591	205	1.3	3.23	< 3	< 7	< 1	< 2	6.26	5.6	103	412	2270	9.00	7	1	0.02	8.75	9	1660	< 1	0.09
677012	51	459	150	1.2	3.68	< 3	< 7	< 1	< 2	4.39	3.9	96	344	1480	10.0	8	2	0.02	9.76	6	1590	< 1	0.07
677013	17	775	157	< 0.3	7.87	< 3	123	< 1	< 2	5.21	< 0.3	91	46	109	9.59	12	< 1	0.50	7.41	37	1340	< 1	0.74
677014	55	2050	996	< 0.3	7.03	< 3	92	< 1	< 2	6.14	0.6	100	99	437	9.42	13	2	0.35	7.96	25	1430	< 1	0.66
677015	42	753	216	< 0.3	6.04	< 3	12	< 1	< 2	4.43	0.7	123	84	833	11.4	12	1	0.06	9.56	30	1550	< 1	0.28
677016	49	836	352	< 0.3	10.5	< 3	188	< 1	< 2	8.00	< 0.3	30	17	676	3.45	16	< 1	0.71	2.36	31	478	< 1	1.98
677017	59	1130	255	0.6	10.1	< 3	133	< 1	< 2	8.36	0.6	76	47	1430	4.55	16	< 1	0.40	2.60	16	516	< 1	1.84
677018	3	24	7	< 0.3	12.6	< 3	106	< 1	< 2	8.82	< 0.3	25	34	80	3.56	16	< 1	0.25	2.80	12	474	< 1	1.86
677019	7	12	< 5	< 0.3	6.31	< 3	102	3	< 2	1.24	< 0.3	4	14	22	1.27	12	< 1	0.34	0.28	9	165	3	4.48
677020	63	601	435	0.7	2.63	129	83	< 1	< 2	3.07	0.6	194	2260	2720	10.6	6	2	0.16	13.4	27	1260	< 1	0.06
677021	23	394	111	0.4	8.07	< 3	108	< 1	< 2	7.96	0.6	62	88	945	4.89	15	< 1	0.26	3.27	15	593	< 1	1.55
677022	11	164	58	< 0.3	9.68	< 3	118	< 1	< 2	7.34	< 0.3	55	237	340	6.04	14	< 1	0.30	4.48	17	778	< 1	1.59
677023	47	333	134	< 0.3	9.16	< 3	85	< 1	< 2	6.68	< 0.3	77	120	943	7.28	12	1	0.27	5.98	24	934	< 1	1.27
677024	15	215	62	< 0.3	9.83	< 3	85	< 1	< 2	7.23	0.5	74	78	432	6.77	15	1	0.25	5.21	22	824	< 1	1.28
677025	74	864	314	0.6	10.6	< 3	103	< 1	< 2	7.42	0.6	89	56	1520	6.24	13	1	0.31	4.66	21	743	< 1	1.22
677026	56	396	182	< 0.3	9.44	< 3	122	< 1	< 2	7.46	< 0.3	72	63	824	6.39	14	< 1	0.37	4.94	19	810	< 1	1.29
677027	90	1690	348	< 0.3	9.07	< 3	57	< 1	< 2	6.53	< 0.3	76	69	137	6.91	11	1	0.18	7.17	28	948	< 1	0.97
677028	12	134	41	< 0.3	10.7	< 3	92	< 1	< 2	7.77	< 0.3	51	35	250	4.83	15	1	0.25	4.35	21	635	< 1	1.48
677029	< 2	15	7	< 0.3	10.7	4	102	< 1	< 2	8.20	< 0.3	40	23	38	4.19	15	2	0.24	3.91	20	553	< 1	1.56
677030	< 2	23	14	< 0.3	8.79	< 3	126	< 1	< 2	7.64	< 0.3	42	83	39	4.11	15	< 1	0.25	3.83	23	561	< 1	1.61
677031	< 2	13	13	< 0.3	11.2	< 3	132	< 1	< 2	7.17	< 0.3	54	56	24	4.98	14	1	0.46	5.02	34	689	< 1	1.36
677032	3	22	18	< 0.3	11.3	4	129	< 1	< 2	7.16	< 0.3	50	30	32	4.83	15	< 1	0.47	4.99	35	674	< 1	1.49
677033	3	91	38	< 0.3	11.1	3	123	< 1	< 2	6.22	< 0.3	50	27	49	5.11	14	< 1	0.71	4.80	47	680	< 1	1.66
677034	13	213	85	< 0.3	9.39	5	58	< 1	< 2	6.35	< 0.3	81	65	197	7.11	12	1	0.20	7.13	33	998	< 1	0.91
677035	7	229	77	< 0.3	10.0	< 3	76	< 1	< 2	5.95	< 0.3	61	155	142	6.46	15	2	0.32	5.99	35	878	< 1	1.51
677036	41	791	175	< 0.3	9.99	< 3	76	< 1	< 2	6.18	< 0.3	75	67	681	6.25	13	1	0.36	6.26	39	910	< 1	1.27
677037	< 2	6	< 5	< 0.3	10.3	< 3	85	< 1	< 2	6.09	0.4	61	90	51	5.94	13	< 1	0.36	6.10	46	873	< 1	1.51
677038	< 2	23	12	< 0.3	10.8	5	125	< 1	< 2	6.22	< 0.3	43	75	40	4.57	15	< 1	0.42	4.04	41	666	< 1	2.20
677039	< 2	19	< 5	< 0.3	6.51	4	81	3	< 2	1.41	< 0.3	5	33	149	1.20	11	< 1	0.28	0.38	9	181	4	4.38
677040	72	572	436	0.7	2.64	106	84	< 1	< 2	3.08	0.6	194	2540	2690	10.4	6	2	0.16	13.4	27	1260	< 1	0.06
677041	< 2	61	< 5	< 0.3	10.9	4	120	< 1	< 2	5.86	< 0.3	48	95	42	5.09	14	1	0.37	4.43	40	723	< 1	2.23
677042	3	120	< 5	< 0.3	10.9	< 3	94	< 1	< 2	8.53	0.3	33	98	13	4.81	20	< 1	0.28	3.51	23	803	< 1	2.14

Results

Activation Laboratories Ltd.

Report: A17-12475

Analyte Symbol	Au	Pd	Pt	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na
Unit Symbol	ppb	ppb	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%
Lower Limit	2	5	5	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01
Method Code	FA-ICP	FA-ICP	FA-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
677043	< 2	69	10	< 0.3	10.0	< 3	122	< 1	< 2	7.22	< 0.3	33	104	18	3.96	15	1	0.38	3.48	20	657	< 1	2.13
677044	3	182	52	< 0.3	9.72	5	120	< 1	< 2	6.70	< 0.3	41	105	12	4.44	14	1	0.37	4.01	21	701	< 1	2.17
677045	10	166	51	< 0.3	8.55	< 3	50	< 1	< 2	6.80	< 0.3	66	124	272	6.47	12	1	0.15	6.72	25	1000	< 1	1.10
677046	4	163	46	< 0.3	9.32	5	62	< 1	< 2	6.33	< 0.3	63	120	68	6.61	14	2	0.20	6.18	27	994	< 1	1.53
677047	8	62	29	< 0.3	7.79	< 3	74	< 1	< 2	6.43	0.4	59	116	288	6.69	15	1	0.24	6.15	23	1030	< 1	1.40
677048	103	828	209	1.1	9.81	< 3	119	< 1	< 2	7.12	1.4	66	117	2380	5.16	13	< 1	0.43	4.34	20	776	< 1	1.81
677049	8	102	31	< 0.3	8.40	< 3	78	< 1	< 2	7.14	< 0.3	48	220	196	5.28	14	< 1	0.20	4.77	19	889	< 1	1.50
677050	23	69	36	< 0.3	8.01	< 3	102	< 1	< 2	6.78	< 0.3	46	184	618	5.98	16	< 1	0.25	4.27	15	948	< 1	1.75
677051	11	279	247	< 0.3	7.98	< 3	82	< 1	< 2	6.26	< 0.3	67	76	160	7.89	16	1	0.22	5.92	23	1230	< 1	1.40
677052	27	613	302	< 0.3	7.44	< 3	88	< 1	< 2	6.79	< 0.3	64	91	511	7.39	14	2	0.23	5.89	18	1250	< 1	1.31
677053	146	3460	1620	0.4	4.53	< 3	34	< 1	< 2	6.38	0.7	111	167	1510	9.88	8	< 1	0.12	8.22	22	1560	< 1	0.45
677054	< 2	10	9	< 0.3	8.04	< 3	135	< 1	< 2	6.85	< 0.3	53	92	42	7.06	15	1	0.36	4.73	19	1110	< 1	1.40
677055	2	11	16	< 0.3	7.28	< 3	108	< 1	< 2	7.05	< 0.3	51	166	38	6.76	15	1	0.33	5.37	18	1220	< 1	1.41
677056	8	78	122	< 0.3	5.95	< 3	62	< 1	< 2	6.91	< 0.3	69	187	96	8.57	12	2	0.20	7.06	20	1540	< 1	0.93
677057	74	443	172	1.5	5.40	< 3	38	< 1	< 2	4.66	1.7	109	242	2910	9.50	10	2	0.16	7.85	27	1510	< 1	0.78
677058	51	329	110	0.9	6.74	3	99	< 1	< 2	5.42	0.4	90	262	2300	8.15	13	1	0.36	6.22	23	1240	< 1	1.49
677059	5	18	6	0.4	3.91	< 3	75	3	< 2	1.09	< 0.3	11	30	158	1.50	12	< 1	0.30	0.58	10	234	4	4.74
677060	58	573	443	0.8	2.64	142	84	< 1	< 2	3.09	0.5	196	2510	2730	10.5	7	2	0.16	13.5	27	1280	< 1	0.06
677061	36	252	89	0.6	8.26	< 3	110	< 1	< 2	5.30	0.6	86	171	1740	7.61	14	1	0.43	5.74	27	1100	< 1	1.74
677062	33	252	82	0.3	5.65	< 3	95	< 1	< 2	6.73	0.6	81	376	1160	8.05	12	< 1	0.29	6.92	19	1350	< 1	1.11
677063	13	59	21	< 0.3	2.83	< 3	< 7	< 1	< 2	6.84	0.3	83	780	422	9.07	9	1	0.05	9.07	10	1480	< 1	0.13
677064	40	163	99	0.3	4.41	3	34	< 1	< 2	4.90	0.6	96	398	1220	9.24	10	< 1	0.11	8.00	22	1530	< 1	0.56
677065	50	289	114	0.4	3.26	< 3	< 7	< 1	< 2	5.41	< 0.3	104	271	1370	10.3	9	1	0.04	8.85	15	1620	< 1	0.09
677066	35	842	360	< 0.3	11.0	< 3	159	< 1	< 2	7.09	< 0.3	45	34	264	5.42	16	1	0.37	4.15	34	818	< 1	1.81
677067	20	612	238	< 0.3	9.89	< 3	151	< 1	< 2	7.42	0.6	64	40	750	5.67	16	< 1	0.40	4.19	34	872	< 1	1.33
677068	3	89	119	< 0.3	11.0	4	199	< 1	< 2	6.45	< 0.3	37	48	110	4.17	14	< 1	0.79	3.47	36	653	< 1	1.61
677069	33	1130	605	< 0.3	9.92	< 3	151	< 1	< 2	6.09	0.5	71	100	875	6.06	14	1	0.45	4.79	36	899	< 1	1.24
677070	29	627	150	0.3	10.5	< 3	205	< 1	< 2	6.50	0.8	55	30	985	5.18	14	1	0.68	4.37	36	768	< 1	1.55
677071	31	975	460	0.3	7.66	< 3	116	< 1	< 2	5.59	0.8	95	73	1130	7.44	10	1	0.31	7.93	36	1130	< 1	0.76
677072	14	491	197	< 0.3	7.15	< 3	92	< 1	< 2	5.78	0.8	73	135	226	7.43	13	< 1	0.30	6.72	34	1050	< 1	1.34
677073	27	561	243	< 0.3	7.83	< 3	98	< 1	< 2	5.26	1.0	87	56	726	8.27	13	2	0.25	7.95	37	1100	< 1	0.85
677074	169	1290	355	1.1	9.39	< 3	179	< 1	< 2	6.21	1.0	98	73	2520	7.07	12	1	0.47	5.88	37	855	< 1	1.30
677075	311	819	230	1.5	9.08	< 3	122	< 1	< 2	5.37	1.2	121	102	3760	8.35	20	1	0.36	7.67	52	1050	< 1	0.71
677076	40	498	145	0.7	8.84	3	138	< 1	< 2	5.45	1.2	103	139	1890	8.05	18	< 1	0.38	6.96	47	1030	< 1	1.04
677077	16	182	60	< 0.3	8.25	< 3	121	< 1	< 2	5.47	< 0.3	76	114	645	7.41	16	< 1	0.25	6.08	31	979	< 1	1.57
677078	94	1410	492	2.2	7.80	< 3	126	< 1	< 2	6.71	1.0	105	379	2360	7.60	14	< 1	0.38	5.00	24	883	< 1	1.27
677079	< 2	< 5	< 5	0.4	6.82	< 3	131	3	< 2	0.91	< 0.3	6	21	29	1.45	12	< 1	0.45	0.42	12	178	2	4.69
677080	102	977	110	< 0.3	8.85	< 3	52	< 1	< 2	6.76	< 0.3	56	94	454	4.98	10	< 1	0.18	5.98	18	882	< 1	1.39
677081	49	315	88	0.7	8.40	5	120	< 1	< 2	5.51	1.3	86	264	1690	7.25	13	< 1	0.37	7.39	38	1090	< 1	0.97
677082	32	332	99	0.5	9.87	< 3	280	< 1	< 2	5.81	0.8	73	191	1300	6.08	16	< 1	0.69	6.08	43	891	< 1	1.39
677083	8	38	10	< 0.3	10.0	< 3	114	< 1	< 2	5.15	0.3	54	132	386	5.68	14	< 1	0.43	6.32	48	863	< 1	1.70
677084	10	215	99	< 0.3	8.43	5	103	< 1	< 2	5.94	< 0.3	45	303	350	5.42	12	< 1	0.32	6.33	33	983	< 1	1.41

Analyte Symbol	Au	Pd	Pt	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na
Unit Symbol	ppb	ppb	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%
Lower Limit	2	5	5	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01
Method Code	FA-ICP	FA-ICP	FA-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
677085	53	960	362	0.7	8.33	< 3	86	< 1	< 2	5.68	0.6	73	249	1660	6.14	13	2	0.30	6.64	34	1040	< 1	1.45
677086	26	297	86	0.3	8.93	< 3	144	< 1	< 2	5.94	0.4	51	212	821	5.31	13	< 1	0.34	5.78	31	967	< 1	1.59
677087	48	659	194	0.7	7.68	< 3	122	< 1	< 2	5.17	0.9	75	540	1660	6.39	12	< 1	0.29	6.78	33	1210	< 1	1.26
677088	77	776	268	1.2	6.45	< 3	60	< 1	< 2	4.56	1.0	99	575	2640	7.57	12	2	0.19	7.90	35	1440	< 1	0.96
677089	39	542	233	0.5	6.40	< 3	71	< 1	< 2	4.58	1.0	74	547	1200	7.36	10	1	0.20	7.86	35	1490	< 1	0.95
677090	24	321	119	0.4	8.62	< 3	133	< 1	< 2	4.45	0.9	69	237	1210	6.45	13	< 1	0.40	6.01	40	1190	< 1	2.04
677091	47	555	139	1.2	7.66	< 3	160	< 1	< 2	3.44	1.5	49	113	3120	5.05	11	< 1	0.37	4.06	36	832	< 1	2.01
677092	68	1000	271	1.0	10.9	14	482	< 1	< 2	6.81	1.4	62	89	2120	4.42	16	< 1	0.92	3.14	34	719	< 1	2.09
677093	41	320	91	1.6	9.45	< 3	108	< 1	< 2	6.40	1.3	76	90	2450	5.65	14	2	0.34	4.93	27	1020	< 1	2.00
677094	83	784	318	1.3	5.98	< 3	55	< 1	< 2	4.96	1.1	111	255	2560	8.48	11	< 1	0.17	7.50	28	1570	< 1	0.95
677095	63	440	173	1.2	5.95	< 3	52	< 1	< 2	4.64	1.1	104	266	2540	8.44	11	< 1	0.15	7.63	27	1550	< 1	0.86
677096	77	594	252	0.8	7.51	< 3	115	< 1	< 2	6.03	1.1	66	450	1970	5.89	13	< 1	0.39	5.53	26	1130	< 1	1.70
677097	66	525	229	1.3	6.55	< 3	86	< 1	< 2	5.37	8.4	77	414	1600	7.05	12	2	0.32	7.14	31	1360	< 1	1.27
677098	159	1080	548	0.9	5.16	< 3	56	< 1	< 2	5.01	1.8	94	401	1860	8.66	9	1	0.23	7.80	27	1600	< 1	0.83
677099	91	678	323	0.7	7.12	< 3	123	< 1	< 2	5.16	1.0	73	221	1670	7.11	13	< 1	0.35	6.43	26	1340	< 1	1.68
677100	116	1120	480	1.7	3.87	< 3	14	< 1	< 2	4.73	9.6	83	345	3010	8.34	10	< 1	0.04	7.92	28	1570	3	0.58

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
677001	930	0.003	< 3	< 5	0.62	33	5	< 2	0.10	< 5	< 10	105	< 5	4	81	8
677002	1090	0.006	5	< 5	1.11	31	33	< 2	0.11	< 5	< 10	105	< 5	4	91	10
677003	429	0.014	4	< 5	0.26	26	120	< 2	0.18	< 5	< 10	116	< 5	7	100	22
677004	188	0.003	< 3	< 5	0.25	14	273	< 2	0.09	< 5	< 10	77	< 5	1	76	< 5
677005	259	0.003	3	< 5	0.23	13	265	5	0.06	< 5	< 10	52	< 5	1	74	< 5
677006	815	0.004	6	< 5	0.38	33	6	< 2	0.11	< 5	< 10	109	< 5	4	102	9
677007	555	0.003	42	< 5	0.50	23	112	< 2	0.09	< 5	< 10	76	< 5	3	172	7
677008	239	0.001	39	< 5	0.16	18	175	< 2	0.26	< 5	< 10	166	< 5	2	133	< 5
677009	184	0.002	< 3	< 5	0.12	17	120	< 2	0.09	< 5	< 10	89	< 5	2	52	6
677010	479	0.006	13	< 5	0.25	24	30	< 2	0.11	< 5	< 10	94	< 5	4	83	10
677011	729	0.005	425	< 5	0.37	34	10	< 2	0.12	< 5	< 10	105	8	6	983	10
677012	509	0.004	255	< 5	0.35	35	8	< 2	0.12	< 5	< 10	109	6	5	617	10
677013	450	0.006	< 3	< 5	0.03	14	141	3	0.10	< 5	< 10	66	< 5	4	83	14
677014	614	0.009	5	< 5	0.10	18	164	< 2	0.11	< 5	< 10	79	< 5	5	88	13
677015	860	0.008	4	< 5	0.15	9	34	< 2	0.06	< 5	< 10	55	< 5	3	124	10
677016	249	0.010	< 3	< 5	0.13	7	352	< 2	0.11	< 5	< 10	51	< 5	4	37	13
677017	684	0.007	< 3	< 5	0.64	6	356	< 2	0.10	< 5	< 10	50	< 5	3	49	11
677018	98	0.009	< 3	< 5	0.02	7	335	3	0.10	< 5	< 10	48	< 5	4	35	13
677019	12	0.013	6	< 5	< 0.01	4	136	< 2	0.15	< 5	< 10	23	< 5	39	12	156
677020	3600	0.025	6	< 5	1.66	18	27	< 2	0.22	< 5	< 10	117	< 5	9	79	22
677021	511	0.007	< 3	< 5	0.37	< 4	310	< 2	0.07	< 5	< 10	40	< 5	2	52	8
677022	302	0.012	< 3	< 5	0.17	19	250	< 2	0.19	< 5	< 10	106	< 5	7	57	16
677023	579	0.007	< 3	< 5	0.27	13	225	< 2	0.07	< 5	< 10	54	< 5	4	67	9
677024	572	0.006	< 3	< 5	0.35	13	251	< 2	0.09	< 5	< 10	64	< 5	4	55	9
677025	1090	0.007	< 3	< 5	0.60	8	254	< 2	0.07	< 5	< 10	42	< 5	3	61	10
677026	667	0.011	< 3	< 5	0.36	18	262	< 2	0.14	< 5	< 10	89	< 5	6	58	17
677027	549	0.006	< 3	< 5	0.05	9	196	3	0.06	< 5	< 10	39	< 5	3	72	8
677028	409	0.004	< 3	< 5	0.10	6	286	< 2	0.05	< 5	< 10	31	< 5	2	49	7
677029	217	0.007	< 3	< 5	0.02	6	307	< 2	0.07	< 5	< 10	37	< 5	3	42	9
677030	214	0.005	< 3	< 5	0.02	< 4	306	< 2	0.06	< 5	< 10	31	< 5	1	42	7
677031	287	0.004	< 3	< 5	< 0.01	6	296	< 2	0.05	< 5	< 10	27	< 5	2	51	6
677032	288	0.005	< 3	< 5	0.01	6	309	< 2	0.06	< 5	< 10	29	< 5	2	49	7
677033	296	0.004	< 3	< 5	0.03	5	233	< 2	0.05	< 5	< 10	25	< 5	3	58	6
677034	502	0.006	< 3	< 5	0.07	7	218	< 2	0.06	< 5	< 10	31	< 5	3	78	8
677035	348	0.005	< 3	< 5	0.04	9	288	< 2	0.06	< 5	< 10	44	< 5	5	78	8
677036	686	0.004	< 3	< 5	0.14	5	289	4	0.04	< 5	< 10	23	< 5	2	75	< 5
677037	422	0.005	< 3	< 5	0.01	7	267	3	0.06	< 5	< 10	33	< 5	2	71	7
677038	290	0.007	< 3	< 5	< 0.01	7	332	< 2	0.08	< 5	< 10	44	< 5	3	67	10
677039	22	0.015	5	< 5	0.02	4	126	< 2	0.16	< 5	< 10	24	< 5	36	15	145
677040	3620	0.024	5	< 5	1.63	18	27	< 2	0.19	< 5	< 10	113	< 5	9	80	22
677041	299	0.006	< 3	< 5	< 0.01	9	346	< 2	0.08	< 5	< 10	48	< 5	3	67	9
677042	155	0.007	< 3	< 5	< 0.01	18	518	9	0.09	< 5	< 10	71	< 5	6	55	8

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
677043	150	0.005	< 3	< 5	< 0.01	16	325	3	0.08	< 5	< 10	64	< 5	4	53	9
677044	152	0.003	3	< 5	< 0.01	15	307	< 2	0.07	< 5	< 10	62	< 5	3	48	7
677045	382	0.005	< 3	< 5	0.04	17	169	< 2	0.09	< 5	< 10	64	< 5	3	71	9
677046	362	0.004	< 3	< 5	0.01	17	224	< 2	0.07	< 5	< 10	67	< 5	4	70	7
677047	277	0.011	5	< 5	0.05	29	191	< 2	0.17	< 5	< 10	130	< 5	8	94	17
677048	878	0.004	7	< 5	0.42	15	275	< 2	0.06	< 5	< 10	58	< 5	3	118	6
677049	376	0.005	< 3	< 5	0.03	14	236	< 2	0.08	< 5	< 10	62	< 5	3	64	8
677050	213	0.032	< 3	< 5	0.10	25	229	4	0.31	< 5	< 10	154	< 5	14	58	50
677051	345	0.011	< 3	< 5	0.05	21	184	< 2	0.16	< 5	< 10	101	< 5	6	71	17
677052	348	0.011	< 3	< 5	0.12	25	177	< 2	0.15	< 5	< 10	104	< 5	7	63	18
677053	766	0.008	4	< 5	0.43	27	69	< 2	0.12	< 5	< 10	100	< 5	6	91	13
677054	195	0.015	< 3	< 5	0.03	28	235	< 2	0.21	< 5	< 10	132	< 5	9	55	22
677055	182	0.014	< 3	< 5	0.02	35	204	< 2	0.21	< 5	< 10	153	< 5	10	56	23
677056	293	0.007	< 3	< 5	0.02	37	116	< 2	0.16	< 5	< 10	141	< 5	8	95	16
677057	1400	0.005	175	< 5	0.73	30	57	< 2	0.12	< 5	< 10	103	< 5	5	575	10
677058	1100	0.005	6	< 5	0.78	29	149	< 2	0.12	< 5	< 10	108	< 5	6	73	9
677059	76	0.009	< 3	< 5	0.04	< 4	73	< 2	0.15	< 5	< 10	25	< 5	17	18	155
677060	3680	0.026	5	< 5	1.65	18	27	< 2	0.25	< 5	< 10	121	< 5	9	81	23
677061	764	0.006	< 3	< 5	0.54	19	189	< 2	0.11	< 5	< 10	80	< 5	5	69	9
677062	721	0.005	3	< 5	0.43	40	152	< 2	0.15	< 5	< 10	143	< 5	11	72	11
677063	449	0.004	< 3	< 5	0.23	41	37	< 2	0.25	< 5	< 10	136	< 5	21	77	11
677064	683	0.006	< 3	< 5	0.29	33	42	< 2	0.18	< 5	< 10	135	< 5	11	87	12
677065	808	0.008	< 3	< 5	0.40	33	8	< 2	0.16	< 5	< 10	128	< 5	7	77	15
677066	318	0.013	< 3	< 5	0.05	10	318	< 2	0.11	< 5	< 10	58	< 5	6	49	15
677067	547	0.009	6	< 5	0.19	8	294	< 2	0.13	< 5	< 10	64	< 5	4	63	12
677068	211	0.010	< 3	< 5	0.03	8	282	< 2	0.09	< 5	< 10	44	< 5	4	47	14
677069	511	0.007	5	< 5	0.22	8	247	4	0.07	< 5	< 10	42	< 5	4	75	9
677070	495	0.010	< 3	< 5	0.22	8	287	< 2	0.09	< 5	< 10	49	< 5	4	68	12
677071	724	0.008	8	< 5	0.23	11	142	< 2	0.08	< 5	< 10	51	< 5	4	112	12
677072	407	0.018	79	< 5	0.10	22	155	< 2	0.28	< 5	< 10	136	< 5	11	255	33
677073	737	0.014	9	< 5	0.24	13	141	3	0.13	< 5	< 10	69	< 5	6	145	20
677074	1140	0.010	4	< 5	0.80	11	237	< 2	0.08	< 5	< 10	52	< 5	5	100	14
677075	1060	0.012	4	< 5	0.77	7	198	< 2	0.08	< 5	< 10	119	< 5	3	143	9
677076	784	0.009	24	< 5	0.45	10	198	< 2	0.11	< 5	< 10	95	< 5	4	180	12
677077	434	0.025	< 3	< 5	0.20	12	174	5	0.16	< 5	< 10	73	< 5	14	71	68
677078	1010	0.020	< 3	< 5	1.08	27	231	< 2	0.29	< 5	< 10	170	< 5	10	70	26
677079	11	0.011	4	< 5	< 0.01	< 4	130	< 2	0.14	< 5	< 10	19	< 5	36	17	167
677080	638	0.003	< 3	< 5	0.13	27	166	< 2	0.07	< 5	< 10	90	< 5	3	43	7
677081	654	0.004	44	< 5	0.33	14	148	< 2	0.06	< 5	< 10	63	< 5	2	212	5
677082	567	0.005	40	< 5	0.33	12	264	< 2	0.07	< 5	< 10	79	< 5	2	140	5
677083	210	0.002	10	< 5	0.08	9	178	< 2	0.03	< 5	< 10	32	< 5	< 1	79	< 5
677084	258	0.004	< 3	< 5	0.06	20	175	< 2	0.08	< 5	< 10	73	< 5	3	65	6

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
677085	736	0.003	24	< 5	0.43	20	156	< 2	0.07	< 5	< 10	71	< 5	2	117	5
677086	457	0.003	< 3	< 5	0.25	19	190	< 2	0.07	< 5	< 10	66	< 5	2	66	< 5
677087	755	0.003	< 3	< 5	0.46	20	142	< 2	0.07	< 5	< 10	73	< 5	2	88	5
677088	1170	0.004	< 3	< 5	0.62	24	88	< 2	0.08	< 5	< 10	83	< 5	3	121	6
677089	663	0.003	< 3	< 5	0.25	25	93	< 2	0.08	< 5	< 10	86	< 5	3	119	6
677090	590	0.007	13	< 5	0.37	22	164	< 2	0.14	< 5	< 10	96	< 5	5	124	11
677091	449	0.003	3	< 5	0.47	12	185	< 2	0.05	< 5	< 10	49	< 5	3	204	< 5
677092	857	0.006	< 3	< 5	0.60	13	342	< 2	0.07	< 5	< 10	52	< 5	3	93	8
677093	604	0.004	< 3	< 5	0.63	17	232	< 2	0.05	< 5	< 10	53	< 5	2	99	< 5
677094	1110	0.011	4	< 5	0.78	31	90	< 2	0.18	< 5	< 10	127	< 5	7	138	17
677095	1100	0.004	6	< 5	0.70	27	89	< 2	0.09	< 5	< 10	89	< 5	3	122	6
677096	750	0.004	< 3	< 5	0.48	24	202	< 2	0.08	< 5	< 10	83	< 5	4	85	6
677097	790	0.004	307	< 5	0.36	31	129	< 2	0.10	< 5	< 10	96	< 5	5	1470	7
677098	815	0.007	43	< 5	0.43	33	67	< 2	0.14	< 5	< 10	121	< 5	6	267	14
677099	617	0.006	80	< 5	0.32	32	160	< 2	0.12	< 5	< 10	109	< 5	8	226	10
677100	897	0.013	342	< 5	0.47	35	23	3	0.15	< 5	< 10	111	< 5	15	1660	26

Analyte Symbol	Au	Pd	Pt	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na
Unit Symbol	ppb	ppb	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%
Lower Limit	2	5	5	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01
Method Code	FA-ICP	FA-ICP	FA-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
GXR-1 Meas				32.0	2.12	426	692	1	1390	0.92	3.0	8	13	1180	24.2	15	9	0.05	0.22	8	926	15	0.05
GXR-1 Cert				31.0	3.52	427	750	1.22	1380	0.960	3.30	8.20	12.0	1110	23.6	13.8	3.90	0.050	0.217	8.20	852	18.0	0.0520
GXR-4 Meas				3.0	6.41	103	86	2	14	1.06	< 0.3	15	43	6430	3.04	17	< 1	2.59	1.71	11	150	316	0.52
GXR-4 Cert				4.0	7.20	98.0	1640	1.90	19.0	1.01	0.860	14.6	64.0	6520	3.09	20.0	0.110	4.01	1.66	11.1	155	310	0.564
SDC-1 Meas					7.68	< 3	622	3		1.06		19	45	34	4.65	22	< 1	2.66	0.97	34	879		1.53
SDC-1 Cert					8.34	0.220	630	3.00		1.00		18.0	64.00	30.000	4.82	21.00	0.20	2.72	1.02	34	880.00		1.52
GXR-6 Meas				0.3	12.9	220	> 1000	1	< 2	0.20	< 0.3	14	47	66	5.47	30	< 1	1.81	0.61	35	1040	< 1	0.10
GXR-6 Cert				1.30	17.7	330	1300	1.40	0.290	0.180	1.00	13.8	96.0	66.0	5.58	35.0	0.0680	1.87	0.609	32.0	1010	2.40	0.104
DNC-1a Meas							97					56	117	96		13				5			
DNC-1a Cert							118					57	270	100		15				5.2			
PK2 Meas	4640	5710	4580																				
PK2 Cert	4790	5918.00	4749.00																				
PK2 Meas	4780	5870	4810																				
PK2 Cert	4790	5918.00	4749.00																				
PK2 Meas	4830	5990	4910																				
PK2 Cert	4790	5918.00	4749.00																				
PK2 Meas	4900	5980	4940																				
PK2 Cert	4790	5918.00	4749.00																				
PK2 Meas	5070	6220	5050																				
PK2 Cert	4790	5918.00	4749.00																				
SBC-1 Meas						21	642	3	< 2		0.5	23	87	31		27				164		2	
SBC-1 Cert						25.7	788.0	3.20	0.70		0.40	22.7	109	31.0000		27.0				163		2	
SdAR-M2 (U.S.G.S.) Meas							939	7	< 2		5.5	14	51	239		17	2			18		13	
SdAR-M2 (U.S.G.S.) Cert							990	6.6	1.05		5.1	12.4	49.6	236.0000		17.6	1.44			18		13	
CDN-PGMS-28 Meas	234	1770	1620																				
CDN-PGMS-28 Cert	193.000	1750	1510																				
CDN-PGMS-28 Meas	190	1750	1470																				
CDN-PGMS-28 Cert	193.000	1750	1510																				
CDN-PGMS-28 Meas	188	1800	1510																				
CDN-PGMS-28 Cert	193.000	1750	1510																				
CDN-PGMS-28	197	1730	1550																				

Analyte Symbol	Au	Pd	Pt	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na
Unit Symbol	ppb	ppb	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%
Lower Limit	2	5	5	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01
Method Code	FA-ICP	FA-ICP	FA-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
Meas																							
CDN-PGMS-28 Cert	193.000	1750	1510																				
CDN-PGMS-28 Meas	197	1810	1470																				
CDN-PGMS-28 Cert	193.000	1750	1510																				
CDN-PGMS-28 Meas	198	1830	1550																				
CDN-PGMS-28 Cert	193.000	1750	1510																				
CDN-PGMS-28 Meas	197	1880	1580																				
CDN-PGMS-28 Cert	193.000	1750	1510																				
677010 Orig	58	312	108																				
677010 Dup	50	282	95																				
677020 Orig	69	621	450																				
677020 Dup	57	582	420																				
677026 Orig				< 0.3	9.12	< 3	121	< 1	< 2	7.39	< 0.3	71	60	812	6.32	14	< 1	0.36	4.88	18	798	< 1	1.27
677026 Dup				< 0.3	9.76	< 3	124	< 1	< 2	7.54	0.6	72	67	836	6.47	14	< 1	0.39	4.99	19	822	< 1	1.31
677027 Orig				< 0.3	9.16	< 3	57	< 1	< 2	6.56	< 0.3	77	62	138	6.96	12	1	0.18	7.22	28	957	< 1	0.98
677027 Dup				< 0.3	8.98	< 3	56	< 1	< 2	6.50	0.4	75	77	135	6.85	11	1	0.18	7.13	28	939	< 1	0.96
677030 Orig	< 2	23	14																				
677030 Dup	2	23	14																				
677040 Orig	67	572	439																				
677040 Dup	77	572	434																				
677050 Orig	23	69	36	< 0.3	8.01	< 3	102	< 1	< 2	6.78	< 0.3	46	184	618	5.98	16	< 1	0.25	4.27	15	948	< 1	1.75
677050 Split PREP DUP	28	59	37	< 0.3	8.27	< 3	102	< 1	< 2	6.83	0.3	47	149	599	6.04	16	< 1	0.26	4.35	15	957	< 1	1.75
677050 Orig	22	66	33																				
677050 Dup	24	73	40																				
677059 Orig	5	17	7																				
677059 Dup	5	18	6																				
677065 Orig				0.4	3.22	< 3	< 7	< 1	< 2	5.35	0.6	103	269	1320	10.2	9	1	0.04	8.76	15	1590	< 1	0.08
677065 Dup				0.4	3.30	< 3	< 7	< 1	< 2	5.48	< 0.3	105	273	1410	10.4	8	1	0.04	8.95	15	1650	< 1	0.09
677067 Orig				< 0.3	10.8	4	152	< 1	< 2	7.46	0.6	63	29	748	5.67	16	1	0.43	4.22	35	866	< 1	1.33
677067 Dup				< 0.3	9.01	< 3	150	< 1	< 2	7.39	0.7	65	51	751	5.66	15	< 1	0.37	4.16	33	877	< 1	1.33
677079 Orig	< 2	< 5	< 5																				
677079 Dup	4	< 5	< 5																				
677089 Orig	38	539	234																				
677089 Dup	40	544	231																				
677095 Orig				1.2	5.94	< 3	52	< 1	< 2	4.62	1.1	104	245	2540	8.44	11	1	0.15	7.61	27	1560	< 1	0.86
677095 Dup				1.2	5.96	< 3	52	< 1	< 2	4.65	1.1	105	286	2540	8.45	11	< 1	0.15	7.65	27	1550	< 1	0.86

Analyte Symbol	Au	Pd	Pt	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na
Unit Symbol	ppb	ppb	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%
Lower Limit	2	5	5	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01
Method Code	FA-ICP	FA-ICP	FA-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
677099 Orig	93	680	319																				
677099 Dup	90	676	326																				
677100 Orig	116	1120	480	1.7	3.87	< 3	14	< 1	< 2	4.73	9.6	83	345	3010	8.34	10	< 1	0.04	7.92	28	1570	3	0.58
677100 Split PREP DUP	106	1190	506	1.8	3.84	< 3	14	< 1	< 2	4.69	9.8	83	309	3070	8.26	10	< 1	0.04	7.83	28	1530	3	0.58
Method Blank				< 0.3	< 0.01	< 3	< 7	< 1	< 2	< 0.01	< 0.3	< 1		< 1	< 0.01	< 1	< 1	< 0.01	< 0.01	< 1		< 1	< 0.01
Method Blank				< 0.3	< 0.01	< 3	< 7	< 1	< 2	< 0.01	< 0.3	< 1		< 1	< 0.01	< 1	< 1	< 0.01	< 0.01	< 1		< 1	< 0.01
Method Blank				< 0.3	< 0.01	< 3	< 7	< 1	< 2	< 0.01	< 0.3	< 1		< 1	< 0.01	< 1	< 1	< 0.01	< 0.01	< 1		< 1	< 0.01
Method Blank	< 2	< 5	< 5																				
Method Blank	< 2	< 5	< 5																				
Method Blank	< 2	< 5	< 5																				
Method Blank	< 2	< 5	< 5																				
Method Blank	< 2	< 5	< 5																				
Method Blank	< 2	< 5	< 5																				
Method Blank	< 2	< 5	< 5																				
Method Blank	< 2	< 5	< 5																				
Method Blank	< 2	< 5	< 5																				
Method Blank	< 2	< 5	< 5																				
Method Blank				< 0.3	< 0.01	< 3	< 7	< 1	< 2	< 0.01	< 0.3	< 1		< 1	< 0.01	< 1	< 1	< 0.01	< 0.01	< 1		< 1	< 0.01
Method Blank	< 2	< 5	< 5																				

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
GXR-1 Meas	45	0.061	758	21	0.26	< 4	298	11	0.03	< 5	40	89	134	35	750	24
GXR-1 Cert	41.0	0.0650	730	122	0.257	1.58	275	13.0	0.036	0.390	34.9	80.0	164	32.0	760	38.0
GXR-4 Meas	44	0.131	41	< 5	1.77	8	215	< 2	0.29	< 5	< 10	86	29	17	73	41
GXR-4 Cert	42.0	0.120	52.0	4.80	1.77	7.70	221	0.970	0.29	3.20	6.20	87.0	30.8	14.0	73.0	186
SDC-1 Meas	36	0.054	21	< 5		16	173		0.17	< 5	< 10	41	< 5		95	31
SDC-1 Cert	38.0	0.0690	25.00	0.54		17.00	180.00		0.606	0.70	3.10	102.00	0.80		103.00	290.00
GXR-6 Meas	26	0.032	94	< 5	0.02	29	43	< 2		< 5	< 10	110	< 5	16	125	63
GXR-6 Cert	27.0	0.0350	101	3.60	0.0160	27.6	35.0	0.0180		2.20	1.54	186	1.90	14.0	118	110
DNC-1a Meas	247		< 3	< 5		32	133		0.29			140		19	54	35
DNC-1a Cert	247		6.3	0.96		31	144		0.29			148		18.0	70	38.0
PK2 Meas																
PK2 Cert																
PK2 Meas																
PK2 Cert																
PK2 Meas																
PK2 Cert																
PK2 Meas																
PK2 Cert																
PK2 Meas																
PK2 Cert																
SBC-1 Meas	87		27	< 5		22	181		0.51	< 5	< 10	216	< 5	41	178	116
SBC-1 Cert	83		35.0	1.01		20.0	178.0		0.51	0.89	5.76	220.0	1.60	36.5	186	134.0
SdAR-M2 (U.S.G.S.) Meas	52		787			< 4	129				< 10	26	7	27	771	116
SdAR-M2 (U.S.G.S.) Cert	49		808			4.1	144				2.53	25.2	2.8	32.7	760	259
CDN-PGMS-28 Meas																
CDN-PGMS-28 Cert																
CDN-PGMS-28 Meas																
CDN-PGMS-28 Cert																
CDN-PGMS-28 Meas																
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CDN-PGMS-28 Cert																
CDN-PGMS-28 Meas																
CDN-PGMS-28 Cert																

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
Cert																
CDN-PGMS-28 Meas																
CDN-PGMS-28 Cert																
CDN-PGMS-28 Meas																
CDN-PGMS-28 Cert																
677010 Orig																
677010 Dup																
677020 Orig																
677020 Dup																
677026 Orig	661	0.010	< 3	< 5	0.35	17	257	4	0.14	< 5	< 10	87	< 5	6	58	17
677026 Dup	672	0.011	< 3	< 5	0.36	19	266	< 2	0.14	< 5	< 10	90	< 5	7	57	17
677027 Orig	552	0.006	< 3	< 5	0.05	9	198	3	0.06	< 5	< 10	40	< 5	3	72	8
677027 Dup	546	0.006	< 3	< 5	0.05	9	194	4	0.06	< 5	< 10	39	< 5	3	72	8
677030 Orig																
677030 Dup																
677040 Orig																
677040 Dup																
677050 Orig	213	0.032	< 3	< 5	0.10	25	229	4	0.31	< 5	< 10	154	< 5	14	58	50
677050 Split PREP DUP	215	0.032	< 3	< 5	0.10	27	227	< 2	0.30	< 5	< 10	153	< 5	15	59	51
677050 Orig																
677050 Dup																
677059 Orig																
677059 Dup																
677065 Orig	795	0.008	< 3	< 5	0.39	32	8	< 2	0.16	< 5	< 10	126	< 5	7	76	15
677065 Dup	822	0.008	< 3	< 5	0.41	34	8	8	0.16	< 5	< 10	131	< 5	7	79	15
677067 Orig	545	0.009	5	< 5	0.20	9	295	< 2	0.13	< 5	< 10	63	< 5	4	64	12
677067 Dup	549	0.009	7	< 5	0.19	7	292	< 2	0.13	< 5	< 10	64	< 5	3	63	12
677079 Orig																
677079 Dup																
677089 Orig																
677089 Dup																
677095 Orig	1100	0.004	6	< 5	0.70	27	88	< 2	0.09	< 5	< 10	88	< 5	3	123	6
677095 Dup	1110	0.004	5	< 5	0.70	27	89	< 2	0.09	< 5	< 10	89	< 5	3	122	7
677099 Orig																
677099 Dup																
677100 Orig	897	0.013	342	< 5	0.47	35	23	3	0.15	< 5	< 10	111	< 5	15	1660	26
677100 Split PREP DUP	885	0.014	338	< 5	0.48	34	23	< 2	0.15	< 5	< 10	109	< 5	14	1650	26
Method Blank	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	< 2	< 0.01	< 5	< 10	< 2	< 5	< 1	< 1	< 5

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
Method Blank	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	< 2	< 0.01	< 5	< 10	< 2	< 5	< 1	< 1	< 5
Method Blank	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	< 2	< 0.01	< 5	< 10	< 2	< 5	< 1	< 1	< 5
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Method Blank	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	2	< 0.01	< 5	< 10	< 2	< 5	< 1	< 1	< 5
Method Blank																



Date Submitted: 06-Nov-17
Invoice No.: A17-12480
Invoice Date: 13-Dec-17
Your Reference: EAST BULL

Pavey Ark Minerals Inc.
100 Broad Leaf Cresent
Ancaster ON L9G 3R8
Canada

ATTN: Richard H. Sutcliffe

CERTIFICATE OF ANALYSIS

100 Rock samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1C-OES 50g Fire Assay ICPOES

Code 1F2 Total Digestion ICP(TOTAL)

REPORT **A17-12480**

This report may be reproduced without our consent. If only selected portions of the report are reproduced, permission must be obtained. If no instructions were given at time of sample submittal regarding excess material, it will be discarded within 90 days of this report. Our liability is limited solely to the analytical cost of these analyses. Test results are representative only of material submitted for analysis.

Notes:

Values which exceed the upper limit should be assayed for accurate numbers.

CERTIFIED BY:

A handwritten signature in black ink, appearing to read "Emmanuel Esemé". The signature is stylized with loops and is positioned above a horizontal line.

Emmanuel Esemé , Ph.D.
Quality Control

ACTIVATION LABORATORIES LTD.
41 Bittern Street, Ancaster, Ontario, Canada, L9G 4V5
TELEPHONE +905 648-9611 or +1.888.228.5227 FAX +1.905.648.9613
E-MAIL Ancaster@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

Results

Activation Laboratories Ltd.

Report: A17-12480

Analyte Symbol	Au	Pd	Pt	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na
Unit Symbol	ppb	ppb	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%
Lower Limit	2	5	5	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01
Method Code	FA-ICP	FA-ICP	FA-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
494101	4	27	47	< 0.3	7.79	< 3	184	< 1	3	5.99	< 0.3	50	39	154	7.86	15	< 1	0.47	3.61	24	1050	< 1	1.90
494102	6	39	100	< 0.3	7.25	< 3	118	< 1	< 2	6.55	< 0.3	51	49	270	7.32	16	< 1	0.43	4.04	21	1100	< 1	2.02
494103	49	786	258	0.5	7.86	< 3	97	< 1	< 2	4.81	2.8	71	95	1160	7.91	15	< 1	0.34	4.90	30	1140	< 1	1.98
494104	31	393	124	< 0.3	7.00	< 3	130	< 1	< 2	7.15	0.4	49	56	566	7.23	16	< 1	0.27	4.10	13	1040	< 1	1.93
494105	76	1510	460	0.6	9.72	< 3	213	< 1	< 2	5.61	1.7	84	212	1770	7.15	15	< 1	0.67	5.28	45	992	< 1	1.55
494106	41	707	254	< 0.3	10.0	< 3	261	< 1	< 2	5.91	0.5	69	140	865	6.53	14	< 1	0.73	5.14	46	962	< 1	1.55
494107	26	401	121	0.4	9.78	< 3	159	< 1	< 2	5.99	0.6	70	277	493	6.71	14	< 1	0.50	5.55	38	1010	< 1	1.24
494108	29	447	149	< 0.3	9.09	< 3	137	< 1	< 2	6.25	0.5	67	163	517	6.88	16	< 1	0.46	5.37	31	997	< 1	1.46
494109	28	119	40	< 0.3	7.94	< 3	165	< 1	< 2	6.83	< 0.3	54	89	515	7.04	17	< 1	0.36	4.07	19	962	< 1	1.55
494110	34	366	191	< 0.3	8.15	< 3	103	< 1	< 2	5.72	0.6	62	220	771	7.04	13	< 1	0.24	6.20	30	1160	< 1	1.62
494111	56	628	344	< 0.3	5.49	< 3	44	< 1	< 2	5.20	0.6	74	368	785	7.76	10	< 1	0.13	7.96	29	1400	< 1	0.80
494112	70	539	427	0.5	6.50	< 3	86	< 1	< 2	5.43	0.7	74	459	1540	6.99	10	< 1	0.22	7.54	28	1280	< 1	1.31
494113	63	416	129	0.6	8.55	6	173	< 1	< 2	5.87	0.8	71	197	1480	5.59	12	< 1	0.46	6.00	27	1010	< 1	1.78
494114	36	239	45	< 0.3	8.32	< 3	> 1000	< 1	< 2	5.83	0.7	62	133	769	5.82	13	< 1	1.15	5.21	26	1030	< 1	1.73
494115	30	442	272	< 0.3	7.37	< 3	163	< 1	< 2	5.97	0.4	61	180	623	7.37	14	< 1	0.40	5.85	25	1250	< 1	1.65
494116	67	915	302	< 0.3	5.77	< 3	90	< 1	< 2	5.16	0.4	72	301	763	7.45	9	< 1	0.21	7.50	26	1440	< 1	1.03
494117	30	678	202	0.4	7.10	4	47	< 1	< 2	6.32	0.8	92	163	1020	7.08	10	< 1	0.21	7.94	26	1090	< 1	0.65
494118	28	493	167	< 0.3	6.29	< 3	22	< 1	< 2	5.63	0.4	130	137	867	8.35	9	< 1	0.10	9.61	29	1190	< 1	0.36
494119	3	5	< 5	< 0.3	6.95	< 3	61	3	< 2	2.20	< 0.3	5	18	44	1.48	13	< 1	0.23	0.37	8	266	5	4.52
494120	69	561	423	0.7	2.57	169	78	< 1	< 2	2.96	0.3	192	1920	2530	10.1	6	< 1	0.16	12.7	24	1250	< 1	0.06
494121	45	660	304	0.5	7.23	3	74	< 1	< 2	5.99	0.5	95	153	1100	7.62	9	< 1	0.23	8.08	24	955	< 1	0.69
494122	92	995	354	1.0	7.89	3	101	< 1	< 2	5.73	0.9	122	136	1780	7.66	12	< 1	0.28	7.40	28	998	< 1	0.83
494123	110	762	278	0.8	6.81	< 3	28	< 1	< 2	5.02	0.5	142	100	1200	9.78	10	< 1	0.10	9.90	39	1360	< 1	0.12
494124	58	797	257	1.0	7.90	< 3	52	< 1	< 2	5.38	1.1	136	82	1690	10.1	13	< 1	0.17	8.58	36	1270	< 1	0.19
494125	51	354	115	0.5	5.94	< 3	< 7	< 1	< 2	4.27	0.7	120	79	983	9.42	12	< 1	0.02	11.1	22	1200	< 1	0.04
494126	34	379	104	0.5	7.28	< 3	37	< 1	< 2	5.22	0.6	128	55	810	8.80	10	< 1	0.13	9.59	43	1160	< 1	0.26
494127	35	179	58	0.8	7.76	< 3	63	< 1	< 2	5.63	0.7	122	110	1080	7.93	13	< 1	0.20	8.54	36	1060	< 1	0.39
494128	34	175	40	0.5	9.93	4	142	< 1	< 2	5.82	0.7	88	75	843	7.04	17	< 1	0.46	6.90	41	943	< 1	0.90
494129	10	58	20	< 0.3	8.91	3	84	< 1	< 2	4.50	< 0.3	83	139	220	9.54	26	< 1	0.36	9.13	59	1240	< 1	0.37
494130	13	118	37	< 0.3	8.25	< 3	64	< 1	< 2	5.01	< 0.3	89	139	277	9.58	19	< 1	0.26	9.19	56	1310	< 1	0.18
494131	29	103	30	< 0.3	7.72	4	9	< 1	< 2	3.66	0.4	150	188	756	10.2	19	< 1	0.08	10.3	53	1340	< 1	0.06
494132	35	433	99	0.5	8.10	< 3	54	< 1	< 2	6.09	1.0	94	130	920	9.46	13	< 1	0.14	7.96	33	1240	< 1	0.29
494133	56	239	72	0.4	5.08	3	< 7	< 1	< 2	4.37	1.0	169	194	729	9.87	8	< 1	0.01	11.1	10	1220	< 1	0.04
494134	42	215	66	0.4	5.73	< 3	< 7	< 1	< 2	3.81	0.6	125	147	864	9.81	11	< 1	0.02	11.1	17	1260	< 1	0.04
494135	36	245	316	0.4	7.00	4	93	< 1	< 2	4.76	0.4	82	196	838	9.00	12	< 1	0.27	8.67	28	1210	< 1	0.54
494136	47	197	56	0.4	6.72	< 3	< 7	< 1	< 2	3.52	< 0.3	97	98	1040	10.3	13	< 1	0.03	10.4	29	1340	< 1	0.14
494137	42	854	497	0.4	6.83	< 3	41	< 1	< 2	5.66	0.6	103	175	825	8.70	10	< 1	0.18	8.32	24	1180	< 1	0.65
494138	14	380	138	0.6	12.1	< 3	128	< 1	< 2	6.81	1.2	57	29	1080	5.44	14	< 1	0.47	3.58	34	608	< 1	1.76
494139	3	< 5	< 5	< 0.3	6.41	< 3	56	3	< 2	1.85	< 0.3	5	43	28	1.39	12	< 1	0.20	0.39	6	228	4	4.51
494140	59	566	431	0.7	2.62	165	79	< 1	< 2	3.01	< 0.3	193	2270	2570	10.3	6	< 1	0.16	12.9	25	1260	< 1	0.06
494141	8	291	263	< 0.3	6.26	< 3	57	< 1	< 2	6.42	0.5	77	354	204	7.77	11	< 1	0.25	7.39	21	1270	< 1	0.87
494142	22	542	320	< 0.3	10.9	< 3	114	< 1	< 2	6.62	< 0.3	48	57	274	5.68	15	< 1	0.45	4.79	29	769	< 1	1.53

Results

Activation Laboratories Ltd.

Report: A17-12480

Analyte Symbol	Au	Pd	Pt	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na
Unit Symbol	ppb	ppb	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%
Lower Limit	2	5	5	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01
Method Code	FA-ICP	FA-ICP	FA-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
494143	65	1690	567	0.5	6.07	3	70	< 1	< 2	6.12	0.8	91	288	1520	7.80	9	< 1	0.24	7.29	20	1210	< 1	0.81
494144	58	490	353	0.6	6.56	4	30	< 1	< 2	5.33	0.6	102	159	1380	8.89	10	< 1	0.20	8.29	32	1320	< 1	0.67
494145	271	1210	416	0.7	3.51	< 3	19	< 1	< 2	5.26	0.3	101	364	2380	9.84	7	< 1	0.09	8.76	16	1810	< 1	0.23
494146	345	1210	566	0.8	2.71	< 3	< 7	< 1	< 2	5.66	0.7	103	388	3270	9.81	6	< 1	0.03	9.05	8	1880	< 1	0.07
494147	87	1150	599	< 0.3	4.05	< 3	< 7	< 1	< 2	4.29	0.7	96	196	1130	10.8	7	< 1	0.04	8.30	12	1800	< 1	0.12
494148	79	638	438	< 0.3	3.56	< 3	< 7	< 1	< 2	4.55	0.6	100	158	705	11.7	8	< 1	0.03	8.66	5	1830	< 1	0.06
494149	136	753	538	0.6	4.17	< 3	69	< 1	< 2	5.00	< 0.3	90	199	1810	10.1	8	< 1	0.20	7.98	12	1810	< 1	0.61
494150	133	567	247	1.0	6.37	< 3	162	< 1	< 2	3.52	0.6	94	219	2590	9.62	12	< 1	0.56	6.43	32	1620	< 1	1.40
494151	133	762	357	1.2	4.28	< 3	25	< 1	< 2	4.84	0.4	110	464	3170	10.2	10	< 1	0.12	8.34	20	1820	< 1	0.62
494152	66	481	162	0.6	6.54	< 3	154	< 1	< 2	4.46	< 0.3	94	269	1770	8.87	12	< 1	0.33	6.59	25	1500	< 1	1.76
494153	122	621	415	0.9	5.52	< 3	133	< 1	< 2	4.24	1.0	95	204	2860	10.7	13	< 1	0.46	6.51	26	1750	< 1	1.20
494154	19	180	118	< 0.3	7.19	3	101	< 1	< 2	5.62	< 0.3	62	62	334	8.62	15	1	0.29	4.36	19	1390	< 1	2.11
494155	37	481	464	< 0.3	4.78	< 3	60	< 1	< 2	6.91	< 0.3	75	147	573	10.1	12	< 1	0.18	6.09	12	1750	< 1	1.07
494156	108	1000	867	0.5	4.62	< 3	36	< 1	< 2	5.28	0.5	97	118	1840	11.3	10	< 1	0.15	7.24	18	1920	< 1	0.95
494157	66	630	126	0.8	5.21	< 3	8	< 1	< 2	3.27	0.7	95	53	2140	10.4	12	< 1	0.07	8.83	33	1460	< 1	0.05
494158	35	340	92	0.7	5.63	< 3	< 7	< 1	< 2	3.12	0.7	72	26	1390	9.96	12	< 1	0.04	9.29	35	1440	< 1	0.04
494159	2	8	5	< 0.3	4.67	< 3	55	2	< 2	1.84	< 0.3	4	60	28	1.26	12	< 1	0.24	0.28	7	239	5	4.44
494160	88	573	422	0.7	2.59	206	78	< 1	< 2	2.97	0.4	191	2460	2540	10.1	6	< 1	0.16	12.8	25	1270	< 1	0.06
494161	44	369	76	0.6	4.72	< 3	< 7	< 1	< 2	4.04	0.6	76	43	1720	9.70	12	< 1	0.03	9.70	30	1360	< 1	0.04
494162	35	268	61	0.4	5.91	< 3	44	< 1	< 2	2.91	0.9	61	60	1320	9.32	13	< 1	0.26	8.65	35	1370	< 1	0.64
494163	75	745	170	1.1	5.91	< 3	40	< 1	< 2	2.66	0.5	99	101	2420	9.96	10	< 1	0.22	8.21	29	1360	< 1	0.50
494164	49	464	153	0.4	3.74	< 3	< 7	< 1	< 2	4.87	0.3	90	493	1450	9.18	8	< 1	0.02	9.97	12	1320	< 1	0.03
494165	65	513	124	0.4	3.28	< 3	< 7	< 1	< 2	5.33	0.5	83	478	1730	8.82	8	< 1	0.01	10.5	7	1360	< 1	0.04
494166	24	251	68	< 0.3	5.40	< 3	< 7	< 1	< 2	3.58	< 0.3	79	206	609	9.95	12	< 1	0.02	10.1	19	1290	< 1	0.04
494167	16	176	61	< 0.3	9.96	< 3	109	< 1	< 2	6.89	< 0.3	35	76	373	5.08	16	< 1	0.35	4.60	21	828	< 1	1.72
494168	58	749	222	0.5	8.32	5	84	< 1	< 2	6.39	0.6	58	148	1290	5.86	14	< 1	0.33	5.02	20	955	< 1	1.78
494169	72	725	226	0.5	7.70	< 3	37	< 1	< 2	6.11	0.5	79	121	1400	7.90	14	< 1	0.21	5.72	21	1140	< 1	1.43
494170	25	681	145	< 0.3	9.06	< 3	41	< 1	< 2	6.44	0.5	81	47	734	7.88	14	< 1	0.13	5.60	28	1020	< 1	1.26
494171	128	1080	260	1.2	8.38	16	53	< 1	< 2	5.15	0.5	105	86	2070	7.95	13	< 1	0.28	6.64	41	1050	< 1	1.02
494172	28	725	365	< 0.3	8.98	< 3	58	< 1	< 2	5.70	0.7	75	89	615	6.86	11	< 1	0.27	6.52	36	968	< 1	0.97
494173	42	846	336	0.4	8.35	4	25	< 1	< 2	4.74	0.7	80	59	1320	8.25	11	< 1	0.14	7.56	42	1070	< 1	0.67
494174	66	955	278	0.4	8.72	< 3	23	< 1	< 2	4.14	0.4	96	73	1780	9.01	12	< 1	0.09	7.96	38	1120	< 1	0.76
494175	55	543	180	0.4	8.68	4	17	< 1	< 2	4.70	0.6	84	48	1320	8.96	13	< 1	0.11	7.83	36	1100	< 1	0.39
494176	49	446	116	0.4	8.12	< 3	13	< 1	< 2	4.74	0.4	89	70	1710	9.10	11	< 1	0.11	8.56	35	1150	< 1	0.32
494177	24	377	90	< 0.3	8.95	< 3	26	< 1	< 2	5.04	< 0.3	96	50	1030	7.91	11	< 1	0.14	7.73	36	990	< 1	0.68
494178	44	394	103	0.6	10.2	< 3	60	< 1	< 2	6.57	0.5	97	40	2000	6.41	12	< 1	0.27	6.06	40	766	< 1	1.08
494179	12	8	< 5	< 0.3	4.19	< 3	71	3	< 2	1.00	< 0.3	6	70	45	1.25	11	< 1	0.30	0.30	8	176	2	4.34
494180	91	879	111	< 0.3	8.91	< 3	50	< 1	< 2	6.74	< 0.3	57	164	441	4.97	10	< 1	0.17	5.82	17	893	< 1	1.32
494181	35	511	118	0.7	9.70	5	41	< 1	< 2	6.38	< 0.3	112	55	1980	7.21	13	< 1	0.17	6.02	33	815	< 1	1.01
494182	22	404	92	0.3	9.24	< 3	26	< 1	< 2	4.77	< 0.3	90	95	1060	8.65	12	< 1	0.14	6.92	36	984	< 1	0.72
494183	38	552	147	0.5	9.96	5	42	< 1	< 2	6.32	0.5	103	173	1640	6.99	13	< 1	0.15	5.79	28	808	< 1	1.18
494184	25	547	101	0.9	10.5	6	44	< 1	< 2	5.91	< 0.3	104	133	2640	6.85	13	< 1	0.16	5.46	30	763	< 1	1.46

Analyte Symbol	Au	Pd	Pt	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na
Unit Symbol	ppb	ppb	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%
Lower Limit	2	5	5	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01
Method Code	FA-ICP	FA-ICP	FA-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
494185	15	154	40	< 0.3	11.0	< 3	46	< 1	< 2	5.97	< 0.3	71	239	676	6.26	15	< 1	0.16	5.45	29	756	< 1	1.45
494186	43	395	95	0.8	9.77	< 3	36	< 1	< 2	6.04	0.5	100	333	1890	6.89	13	< 1	0.17	5.75	26	808	< 1	1.40
494187	30	232	64	0.4	9.05	< 3	39	< 1	< 2	6.81	0.5	68	257	1250	5.75	12	< 1	0.17	5.41	23	826	< 1	1.57
494188	15	280	81	< 0.3	9.12	< 3	22	< 1	< 2	4.24	< 0.3	74	136	791	7.30	10	< 1	0.12	6.78	36	994	< 1	1.99
494189	29	407	116	0.5	8.33	4	15	< 1	< 2	5.11	0.6	76	240	1620	7.34	11	< 1	0.09	6.51	31	990	< 1	1.78
494190	69	594	182	0.9	8.65	< 3	27	< 1	< 2	6.64	< 0.3	78	191	2480	6.37	13	< 1	0.14	5.08	21	844	< 1	1.93
494191	27	438	103	0.8	10.8	4	50	< 1	< 2	5.17	< 0.3	86	284	2110	6.81	14	< 1	0.26	5.16	35	798	< 1	2.00
494192	24	491	118	0.5	9.67	< 3	36	< 1	< 2	5.49	0.4	79	280	1460	7.01	13	< 1	0.22	5.71	32	877	< 1	1.72
494193	29	797	311	1.0	8.97	4	47	< 1	< 2	5.34	0.4	130	293	2330	7.09	12	< 1	0.28	5.35	27	803	< 1	1.96
494194	21	502	126	0.5	8.37	< 3	49	< 1	< 2	5.27	0.5	73	358	1590	6.78	11	< 1	0.29	6.17	27	939	< 1	1.96
494195	100	666	144	1.2	7.85	< 3	39	< 1	< 2	5.36	0.4	101	360	2910	7.35	11	1	0.20	6.31	26	943	< 1	1.46
494196	43	550	174	0.7	8.00	< 3	43	< 1	< 2	4.36	0.4	82	322	1930	7.19	13	< 1	0.29	6.14	28	972	< 1	1.78
494197	66	877	268	1.2	6.82	< 3	41	< 1	< 2	4.17	0.5	108	576	2940	7.85	11	< 1	0.24	6.59	26	1130	< 1	1.34
494198	50	283	71	1.4	3.87	< 3	< 7	< 1	< 2	5.28	< 0.3	107	577	2400	8.53	7	< 1	0.03	9.79	20	1500	< 1	0.13
494199	< 2	6	< 5	0.3	6.86	< 3	102	3	< 2	1.26	< 0.3	4	20	22	1.33	12	< 1	0.36	0.29	8	177	4	4.52
494200	67	550	424	0.7	2.56	161	78	< 1	< 2	2.95	0.4	190	1880	2520	10.1	6	< 1	0.16	12.6	24	1240	< 1	0.06

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
494101	111	0.042	< 3	< 5	0.06	28	205	< 2	0.49	< 5	20	221	< 5	19	61	59
494102	99	0.036	3	< 5	0.12	34	187	< 2	0.33	< 5	< 10	160	< 5	20	70	37
494103	475	0.026	125	< 5	0.21	17	171	< 2	0.31	< 5	< 10	125	< 5	10	388	29
494104	134	0.057	12	< 5	0.12	37	197	< 2	0.23	< 5	< 10	158	< 5	29	92	48
494105	935	0.014	53	< 5	0.37	12	246	< 2	0.14	< 5	< 10	74	< 5	6	208	16
494106	689	0.007	18	< 5	0.20	8	248	< 2	0.06	< 5	< 10	43	< 5	3	108	9
494107	513	0.008	< 3	< 5	0.10	9	227	< 2	0.07	< 5	< 10	54	< 5	3	104	11
494108	362	0.021	32	< 5	0.09	16	205	< 2	0.26	< 5	< 10	107	< 5	8	125	27
494109	153	0.041	< 3	< 5	0.21	31	233	< 2	0.34	< 5	< 10	189	< 5	19	54	52
494110	376	0.005	55	< 5	0.10	22	153	< 2	0.10	< 5	< 10	89	< 5	4	149	9
494111	509	0.007	72	< 5	0.11	29	59	< 2	0.12	< 5	< 10	110	< 5	5	199	13
494112	917	0.005	5	< 5	0.24	26	103	< 2	0.10	< 5	< 10	93	< 5	4	73	9
494113	930	0.005	48	< 5	0.27	22	177	< 2	0.09	< 5	< 10	74	< 5	4	130	8
494114	542	0.013	10	< 5	0.18	25	183	6	0.17	< 5	< 10	112	< 5	6	68	15
494115	408	0.011	< 3	< 5	0.11	29	165	< 2	0.20	< 5	< 10	139	< 5	7	65	19
494116	545	0.007	< 3	< 5	0.11	29	84	< 2	0.12	< 5	< 10	106	< 5	5	76	12
494117	793	0.005	9	< 5	0.28	17	141	< 2	0.06	< 5	< 10	60	< 5	3	150	8
494118	1060	0.005	< 3	< 5	0.33	16	94	< 2	0.06	< 5	< 10	57	< 5	2	119	7
494119	10	0.017	< 3	< 5	0.02	5	132	< 2	0.18	< 5	< 10	29	< 5	37	13	174
494120	3510	0.024	4	< 5	1.61	17	25	< 2	0.28	< 5	< 10	122	< 5	8	79	21
494121	953	0.006	< 3	< 5	0.73	11	200	< 2	0.06	< 5	< 10	51	< 5	2	112	7
494122	1260	0.012	5	< 5	0.64	10	265	< 2	0.08	< 5	< 10	59	< 5	4	134	11
494123	790	0.004	< 3	< 5	0.47	9	138	< 2	0.03	< 5	< 10	36	< 5	2	171	5
494124	1030	0.006	4	< 5	0.62	11	226	< 2	0.06	< 5	< 10	78	< 5	3	179	8
494125	622	0.004	< 3	< 5	0.51	8	27	< 2	0.03	< 5	< 10	58	< 5	1	197	< 5
494126	526	0.005	< 3	< 5	0.42	7	146	< 2	0.04	< 5	< 10	32	< 5	1	183	5
494127	553	0.006	< 3	< 5	0.52	7	193	< 2	0.04	< 5	< 10	79	< 5	1	167	6
494128	568	0.006	< 3	< 5	0.41	6	251	< 2	0.05	< 5	< 10	73	< 5	2	151	7
494129	309	0.010	< 3	< 5	0.19	9	197	< 2	0.09	< 5	< 10	257	< 5	3	175	9
494130	377	0.005	< 3	< 5	0.20	8	172	5	0.05	< 5	< 10	140	< 5	2	163	6
494131	392	0.007	< 3	< 5	0.58	7	95	< 2	0.05	< 5	< 10	165	< 5	1	184	< 5
494132	496	0.006	4	< 5	0.45	8	336	< 2	0.06	< 5	< 10	47	< 5	2	169	8
494133	533	0.005	< 3	< 5	1.31	6	5	< 2	0.03	< 5	< 10	36	< 5	< 1	165	< 5
494134	525	0.004	< 3	< 5	0.64	6	3	< 2	0.03	< 5	< 10	47	< 5	< 1	162	< 5
494135	422	0.007	< 3	< 5	0.42	16	105	< 2	0.08	< 5	< 10	92	< 5	3	136	9
494136	481	0.005	< 3	< 5	0.33	7	34	< 2	0.04	< 5	< 10	79	< 5	2	157	< 5
494137	684	0.005	< 3	< 5	0.66	16	121	< 2	0.07	< 5	< 10	62	< 5	3	113	9
494138	475	0.004	< 3	< 5	0.54	< 4	338	< 2	0.03	< 5	< 10	22	< 5	1	89	< 5
494139	12	0.014	5	< 5	0.02	4	118	< 2	0.14	< 5	< 10	23	< 5	35	14	162
494140	3530	0.024	4	< 5	1.65	17	25	< 2	0.27	< 5	< 10	122	< 5	8	79	22
494141	465	0.006	< 3	< 5	0.39	28	126	< 2	0.13	< 5	< 10	101	< 5	5	90	13
494142	361	0.005	< 3	< 5	0.07	8	287	3	0.06	< 5	< 10	40	< 5	3	70	10

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
494143	849	0.006	< 3	< 5	0.44	26	119	< 2	0.13	< 5	< 10	101	< 5	5	79	11
494144	803	0.004	< 3	< 5	0.38	16	101	< 2	0.07	< 5	< 10	60	< 5	3	102	8
494145	827	0.005	< 3	< 5	0.33	36	18	< 2	0.13	< 5	< 10	124	< 5	5	82	10
494146	955	0.006	< 3	< 5	0.45	38	9	< 2	0.13	< 5	< 10	124	< 5	6	79	11
494147	553	0.006	< 3	< 5	0.16	35	8	< 2	0.13	< 5	< 10	129	< 5	6	84	12
494148	422	0.014	< 3	< 5	0.12	40	7	< 2	0.20	< 5	< 10	164	< 5	8	71	27
494149	584	0.006	< 3	< 5	0.26	39	55	4	0.15	< 5	< 10	142	< 5	7	78	14
494150	824	0.006	< 3	< 5	0.44	29	104	< 2	0.12	< 5	< 10	109	< 5	5	96	11
494151	1090	0.006	< 3	< 5	0.59	31	25	< 2	0.15	< 5	< 10	127	< 5	7	99	12
494152	1040	0.004	< 3	< 5	0.43	26	142	< 2	0.12	< 5	< 10	102	< 5	6	83	9
494153	731	0.013	< 3	< 5	0.48	31	74	< 2	0.26	< 5	< 10	158	< 5	10	104	28
494154	205	0.027	< 3	< 5	0.06	35	231	< 2	0.22	< 5	< 10	160	< 5	15	72	51
494155	325	0.014	< 3	< 5	0.10	45	140	< 2	0.37	< 5	< 10	241	< 5	11	71	26
494156	684	0.006	< 3	< 5	0.26	38	45	< 2	0.16	< 5	< 10	155	< 5	7	93	13
494157	631	0.005	< 3	< 5	0.86	51	4	< 2	0.12	< 5	< 10	225	< 5	3	132	10
494158	422	0.005	< 3	< 5	0.37	60	3	< 2	0.15	< 5	< 10	262	< 5	3	125	12
494159	10	0.013	3	< 5	0.01	< 4	77	< 2	0.16	< 5	< 10	27	< 5	24	10	166
494160	3460	0.025	3	< 5	1.61	17	25	2	0.31	< 5	< 10	124	< 5	8	77	23
494161	364	0.007	< 3	< 5	0.67	66	3	< 2	0.21	< 5	< 10	355	< 5	5	121	18
494162	408	0.006	< 3	< 5	0.44	56	19	< 2	0.15	< 5	< 10	238	< 5	4	117	15
494163	910	0.008	< 3	< 5	0.81	34	16	< 2	0.12	< 5	< 10	117	< 5	4	119	15
494164	675	0.013	< 3	< 5	0.60	32	4	< 2	0.15	< 5	< 10	129	< 5	10	81	20
494165	642	0.005	< 3	< 5	0.56	49	4	< 2	0.13	< 5	< 10	183	< 5	5	74	9
494166	325	0.004	< 3	< 5	0.37	42	3	< 2	0.13	< 5	< 10	208	< 5	3	84	10
494167	186	0.008	< 3	< 5	0.09	21	212	< 2	0.12	< 5	< 10	85	< 5	4	55	13
494168	485	0.010	< 3	< 5	0.29	23	178	< 2	0.13	< 5	< 10	94	< 5	4	75	18
494169	549	0.004	< 3	< 5	0.49	34	133	< 2	0.12	< 5	< 10	141	< 5	3	96	8
494170	453	0.013	13	< 5	0.20	11	143	< 2	0.13	< 5	< 10	65	< 5	6	89	17
494171	662	0.022	29	< 5	0.38	11	126	< 2	0.16	< 5	< 10	83	< 5	6	134	19
494172	497	0.007	56	< 5	0.16	10	141	< 2	0.07	< 5	< 10	46	< 5	3	179	10
494173	579	0.010	50	< 5	0.24	7	104	< 2	0.08	< 5	< 10	44	< 5	4	147	15
494174	837	0.009	< 3	< 5	0.39	9	95	< 2	0.08	< 5	< 10	53	< 5	3	91	11
494175	682	0.008	< 3	< 5	0.28	7	94	< 2	0.07	< 5	< 10	46	< 5	4	86	10
494176	785	0.006	< 3	< 5	0.39	7	77	5	0.05	< 5	< 10	34	< 5	2	91	7
494177	1080	0.006	5	< 5	0.43	6	126	< 2	0.06	< 5	< 10	33	< 5	2	74	9
494178	1060	0.006	< 3	< 5	0.64	5	217	< 2	0.05	< 5	< 10	25	< 5	2	73	8
494179	17	0.011	< 3	< 5	0.01	< 4	75	< 2	0.16	< 5	< 10	25	< 5	12	12	158
494180	640	0.003	< 3	< 5	0.13	26	163	< 2	0.07	< 5	< 10	91	< 5	3	43	7
494181	1080	0.004	< 3	< 5	0.92	5	206	< 2	0.04	< 5	< 10	22	< 5	1	72	< 5
494182	766	0.005	< 3	< 5	0.61	7	130	< 2	0.05	< 5	< 10	34	< 5	2	78	7
494183	978	0.005	< 3	< 5	0.67	6	204	< 2	0.05	< 5	< 10	32	< 5	2	76	6
494184	999	0.005	< 3	< 5	0.84	5	203	< 2	0.04	< 5	< 10	29	< 5	2	72	6

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
494185	561	0.004	< 3	< 5	0.31	5	207	< 2	0.04	< 5	< 10	31	< 5	1	69	5
494186	935	0.004	< 3	< 5	0.81	10	184	< 2	0.05	< 5	< 10	48	< 5	2	74	6
494187	553	0.003	< 3	< 5	0.40	16	181	< 2	0.06	< 5	< 10	59	< 5	2	68	< 5
494188	724	0.003	3	< 5	0.20	4	116	< 2	0.02	< 5	< 10	19	< 5	< 1	74	< 5
494189	748	0.023	< 3	< 5	0.35	12	119	< 2	0.23	< 5	< 10	89	< 5	9	91	32
494190	883	0.013	< 3	< 5	0.65	15	193	< 2	0.17	< 5	< 10	102	< 5	6	69	16
494191	970	0.004	< 3	< 5	0.66	6	214	< 2	0.04	< 5	< 10	34	< 5	2	80	5
494192	885	0.003	< 3	< 5	0.52	10	185	< 2	0.05	< 5	< 10	45	< 5	2	71	< 5
494193	1480	0.004	< 3	< 5	1.24	16	184	< 2	0.07	< 5	< 10	66	< 5	3	72	7
494194	758	0.005	< 3	< 5	0.49	22	170	< 2	0.10	< 5	< 10	83	< 5	3	73	8
494195	1100	0.005	< 3	< 5	0.94	20	143	< 2	0.08	< 5	< 10	78	< 5	3	81	8
494196	981	0.004	< 3	< 5	0.53	20	146	< 2	0.08	< 5	< 10	72	< 5	3	76	7
494197	1130	0.004	< 3	< 5	0.88	25	109	< 2	0.09	< 5	< 10	89	< 5	3	87	8
494198	968	0.003	< 3	< 5	0.61	31	9	< 2	0.09	< 5	< 10	99	< 5	3	82	6
494199	13	0.015	4	< 5	0.02	5	141	< 2	0.17	< 5	< 10	27	< 5	40	16	176
494200	3490	0.024	5	< 5	1.60	17	25	< 2	0.27	< 5	< 10	120	< 5	8	77	21

Analyte Symbol	Au	Pd	Pt	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na
Unit Symbol	ppb	ppb	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%
Lower Limit	2	5	5	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01
Method Code	FA-ICP	FA-ICP	FA-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
GXR-1 Meas				31.8	2.10	449	646	1	1340	0.92	3.2	7	14	1110	23.5	13	3	0.05	0.21	8	893	14	0.04
GXR-1 Cert				31.0	3.52	427	750	1.22	1380	0.960	3.30	8.20	12.0	1110	23.6	13.8	3.90	0.050	0.217	8.20	852	18.0	0.0520
GXR-4 Meas				3.3	6.49	110	92	2	7	1.07	0.4	15	39	6470	3.06	17	< 1	3.34	1.66	11	148	321	0.50
GXR-4 Cert				4.0	7.20	98.0	1640	1.90	19.0	1.01	0.860	14.6	64.0	6520	3.09	20.0	0.110	4.01	1.66	11.1	155	310	0.564
SDC-1 Meas					8.44	< 3	622	3		1.12		20	45	30	5.00	22	< 1	1.27	1.02	35	926		1.54
SDC-1 Cert					8.34	0.220	630	3.00		1.00		18.0	64.00	30.000	4.82	21.00	0.20	2.72	1.02	34	880.00		1.52
GXR-6 Meas				< 0.3	13.3	260	> 1000	1	< 2	0.20	< 0.3	14	52	66	5.63	31	< 1	1.03	0.61	35	1090	< 1	0.10
GXR-6 Cert				1.30	17.7	330	1300	1.40	0.290	0.180	1.00	13.8	96.0	66.0	5.58	35.0	0.0680	1.87	0.609	32.0	1010	2.40	0.104
DNC-1a Meas							94					57	195	94		14				4			
DNC-1a Cert							118					57	270	100		15				5.2			
PK2 Meas	4640	5710	4580																				
PK2 Cert	4790	5918.00	4749.00																				
PK2 Meas	4780	5870	4810																				
PK2 Cert	4790	5918.00	4749.00																				
PK2 Meas	4830	5990	4910																				
PK2 Cert	4790	5918.00	4749.00																				
PK2 Meas	4900	5980	4940																				
PK2 Cert	4790	5918.00	4749.00																				
PK2 Meas	5070	6220	5050																				
PK2 Cert	4790	5918.00	4749.00																				
SBC-1 Meas						27	558	3	< 2		0.3	24	79	35		26				163		3	
SBC-1 Cert						25.7	788.0	3.20	0.70		0.40	22.7	109	31.0000		27.0				163		2	
SdAR-M2 (U.S.G.S.) Meas							> 1000	8	< 2		5.6	15	29	252		16	< 1			18		11	
SdAR-M2 (U.S.G.S.) Cert							990	6.6	1.05		5.1	12.4	49.6	236.0000		17.6	1.44			18		13	
CDN-PGMS-28 Meas	234	1770	1620																				
CDN-PGMS-28 Cert	193.000	1750	1510																				
CDN-PGMS-28 Meas	190	1750	1470																				
CDN-PGMS-28 Cert	193.000	1750	1510																				
CDN-PGMS-28 Meas	188	1800	1510																				
CDN-PGMS-28 Cert	193.000	1750	1510																				
CDN-PGMS-28	197	1730	1550																				

Analyte Symbol	Au	Pd	Pt	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na
Unit Symbol	ppb	ppb	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%
Lower Limit	2	5	5	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01
Method Code	FA-ICP	FA-ICP	FA-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
Meas																							
CDN-PGMS-28 Cert	193.000	1750	1510																				
CDN-PGMS-28 Meas	197	1810	1470																				
CDN-PGMS-28 Cert	193.000	1750	1510																				
CDN-PGMS-28 Meas	198	1830	1550																				
CDN-PGMS-28 Cert	193.000	1750	1510																				
CDN-PGMS-28 Meas	197	1880	1580																				
CDN-PGMS-28 Cert	193.000	1750	1510																				
494108 Orig	29	426	151																				
494108 Dup	30	468	147																				
494109 Orig				< 0.3	7.89	< 3	163	< 1	< 2	6.76	< 0.3	54	83	507	6.97	16	< 1	0.36	4.01	19	949	< 1	1.54
494109 Dup				< 0.3	7.99	3	167	< 1	< 2	6.89	< 0.3	54	95	524	7.11	19	< 1	0.37	4.12	20	975	< 1	1.57
494118 Orig	30	477	167																				
494118 Dup	27	508	167																				
494128 Orig	36	179	41																				
494128 Dup	32	172	39																				
494138 Orig				0.6	12.2	< 3	129	< 1	< 2	6.89	1.2	58	30	1100	5.51	15	< 1	0.47	3.62	35	616	< 1	1.78
494138 Dup				0.5	11.9	< 3	128	< 1	< 2	6.73	1.2	56	29	1060	5.38	14	< 1	0.47	3.53	34	599	< 1	1.74
494140 Orig				0.8	2.63	120	79	< 1	< 2	3.03	< 0.3	194	2080	2600	10.3	7	< 1	0.16	13.0	25	1270	< 1	0.06
494140 Dup				0.7	2.61	211	79	< 1	< 2	2.99	0.4	192	2460	2540	10.3	6	< 1	0.16	12.9	25	1260	< 1	0.06
494148 Orig	77	659	444																				
494148 Dup	82	618	432																				
494150 Orig	133	567	247	1.0	6.37	< 3	162	< 1	< 2	3.52	0.6	94	219	2590	9.62	12	< 1	0.56	6.43	32	1620	< 1	1.40
494150 Split PREP DUP	119	484	212	1.0	6.40	< 3	164	< 1	< 2	3.55	0.4	94	307	2550	9.62	12	< 1	0.54	6.42	32	1630	< 1	1.41
494157 Orig	73	628	132																				
494157 Dup	58	632	121																				
494167 Orig	16	177	62	< 0.3	9.78	3	108	< 1	< 2	6.89	< 0.3	35	85	373	5.09	16	< 1	0.35	4.59	21	831	< 1	1.72
494167 Dup	16	175	59	< 0.3	10.1	< 3	109	< 1	< 2	6.90	< 0.3	36	66	372	5.08	17	< 1	0.36	4.61	21	825	< 1	1.72
494177 Orig	24	381	90																				
494177 Dup	23	373	90																				
494180 Orig				< 0.3	8.97	< 3	50	< 1	< 2	6.77	0.3	58	226	444	4.99	10	< 1	0.18	5.86	17	898	< 1	1.33
494180 Dup				< 0.3	8.86	< 3	49	< 1	< 2	6.70	< 0.3	56	101	438	4.95	9	< 1	0.17	5.78	17	887	< 1	1.31
494187 Orig	31	232	64																				
494187 Dup	30	232	64																				
494190 Orig				0.8	8.59	< 3	27	< 1	< 2	6.61	0.5	78	232	2470	6.35	13	< 1	0.14	5.07	21	837	< 1	1.93
494190 Dup				0.9	8.71	< 3	27	< 1	< 2	6.67	< 0.3	78	151	2500	6.40	14	< 1	0.14	5.09	21	851	< 1	1.93

Analyte Symbol	Au	Pd	Pt	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na
Unit Symbol	ppb	ppb	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%
Lower Limit	2	5	5	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01
Method Code	FA-ICP	FA-ICP	FA-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
494197 Orig	63	868	262																				
494197 Dup	69	885	274																				
494199 Orig	< 2	6	< 5	0.3	6.86	< 3	102	3	< 2	1.26	< 0.3	4	20	22	1.33	12	< 1	0.36	0.29	8	177	4	4.52
494199 Split PREP DUP	< 2	< 5	< 5	< 0.3	6.66	< 3	101	3	< 2	1.22	< 0.3	4	13	18	1.29	11	< 1	0.35	0.28	8	168	3	4.45
Method Blank				< 0.3	< 0.01	< 3	< 7	< 1	< 2	< 0.01	< 0.3	< 1		< 1	< 0.01	< 1	< 1	< 0.01	< 0.01	< 1		< 1	< 0.01
Method Blank				< 0.3	< 0.01	< 3	< 7	< 1	< 2	< 0.01	< 0.3	< 1		< 1	< 0.01	< 1	< 1	< 0.01	< 0.01	< 1		< 1	< 0.01
Method Blank				< 0.3	< 0.01	< 3	< 7	< 1	< 2	< 0.01	< 0.3	< 1		< 1	< 0.01	< 1	< 1	< 0.01	< 0.01	< 1		< 1	< 0.01
Method Blank				< 0.3	0.01	< 3	< 7	< 1	< 2	< 0.01	< 0.3	< 1		< 1	< 0.01	< 1	< 1	< 0.01	< 0.01	< 1		< 1	< 0.01
Method Blank	< 2	< 5	< 5																				
Method Blank	< 2	< 5	< 5																				
Method Blank	< 2	< 5	< 5																				
Method Blank	< 2	< 5	< 5																				
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Method Blank	< 2	< 5	< 5																				
Method Blank	< 2	< 5	< 5																				
Method Blank	< 2	< 5	< 5																				

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
GXR-1 Meas	44	0.056	726	27	0.25	< 4	279	18	0.03	< 5	40	87	158	32	726	12
GXR-1 Cert	41.0	0.0650	730	122	0.257	1.58	275	13.0	0.036	0.390	34.9	80.0	164	32.0	760	38.0
GXR-4 Meas	42	0.133	44	< 5	1.80	8	206	3	0.29	< 5	< 10	88	34	16	73	40
GXR-4 Cert	42.0	0.120	52.0	4.80	1.77	7.70	221	0.970	0.29	3.20	6.20	87.0	30.8	14.0	73.0	186
SDC-1 Meas	38	0.057	22	< 5		17	179		0.29	< 5	< 10	67	< 5		101	44
SDC-1 Cert	38.0	0.0690	25.00	0.54		17.00	180.00		0.606	0.70	3.10	102.00	0.80		103.00	290.00
GXR-6 Meas	28	0.034	95	< 5	0.01	30	43	< 2		< 5	< 10	132	< 5	15	130	74
GXR-6 Cert	27.0	0.0350	101	3.60	0.0160	27.6	35.0	0.0180		2.20	1.54	186	1.90	14.0	118	110
DNC-1a Meas	245		< 3	< 5		29	129		0.28			140		18	59	35
DNC-1a Cert	247		6.3	0.96		31	144		0.29			148		18.0	70	38.0
PK2 Meas																
PK2 Cert																
PK2 Meas																
PK2 Cert																
PK2 Meas																
PK2 Cert																
PK2 Meas																
PK2 Cert																
PK2 Meas																
PK2 Cert																
SBC-1 Meas	89		27	< 5		23	179		0.51	< 5	< 10	224	< 5	39	181	118
SBC-1 Cert	83		35.0	1.01		20.0	178.0		0.51	0.89	5.76	220.0	1.60	36.5	186	134.0
SdAR-M2 (U.S.G.S.) Meas	59		823			5	145				< 10	27	8	31	796	66
SdAR-M2 (U.S.G.S.) Cert	49		808			4.1	144				2.53	25.2	2.8	32.7	760	259
CDN-PGMS-28 Meas																
CDN-PGMS-28 Cert																
CDN-PGMS-28 Meas																
CDN-PGMS-28 Cert																
CDN-PGMS-28 Meas																
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CDN-PGMS-28 Cert																
CDN-PGMS-28 Meas																
CDN-PGMS-28 Cert																

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
Cert																
CDN-PGMS-28 Meas																
CDN-PGMS-28 Cert																
CDN-PGMS-28 Meas																
CDN-PGMS-28 Cert																
494108 Orig																
494108 Dup																
494109 Orig	151	0.042	< 3	< 5	0.21	30	231	< 2	0.40	< 5	< 10	207	< 5	19	53	60
494109 Dup	154	0.040	4	< 5	0.21	31	235	< 2	0.27	< 5	< 10	172	< 5	20	55	44
494118 Orig																
494118 Dup																
494128 Orig																
494128 Dup																
494138 Orig	480	0.004	3	< 5	0.55	< 4	343	< 2	0.03	< 5	< 10	22	< 5	1	90	5
494138 Dup	469	0.004	< 3	< 5	0.53	< 4	333	< 2	0.03	< 5	< 10	21	< 5	1	88	< 5
494140 Orig	3550	0.023	4	< 5	1.63	17	26	< 2	0.22	< 5	< 10	118	< 5	8	81	21
494140 Dup	3500	0.025	3	< 5	1.66	17	25	< 2	0.31	< 5	< 10	126	< 5	8	78	23
494148 Orig																
494148 Dup																
494150 Orig	824	0.006	< 3	< 5	0.44	29	104	< 2	0.12	< 5	< 10	109	< 5	5	96	11
494150 Split PREP DUP	839	0.005	< 3	< 5	0.44	29	105	< 2	0.12	< 5	< 10	109	< 5	5	95	10
494157 Orig																
494157 Dup																
494167 Orig	187	0.008	< 3	< 5	0.09	20	212	< 2	0.12	< 5	< 10	86	< 5	4	55	12
494167 Dup	186	0.009	< 3	< 5	0.08	21	212	< 2	0.12	< 5	< 10	85	< 5	4	55	13
494177 Orig																
494177 Dup																
494180 Orig	642	0.003	< 3	< 5	0.13	26	165	< 2	0.07	< 5	< 10	91	< 5	3	43	7
494180 Dup	638	0.003	< 3	< 5	0.12	26	162	< 2	0.07	< 5	< 10	90	< 5	3	43	7
494187 Orig																
494187 Dup																
494190 Orig	878	0.013	< 3	< 5	0.64	15	192	< 2	0.17	< 5	< 10	101	< 5	6	70	16
494190 Dup	887	0.013	< 3	< 5	0.65	16	195	< 2	0.17	< 5	< 10	103	< 5	6	68	17
494197 Orig																
494197 Dup																
494199 Orig	13	0.015	4	< 5	0.02	5	141	< 2	0.17	< 5	< 10	27	< 5	40	16	176
494199 Split PREP DUP	12	0.014	5	< 5	0.02	4	137	< 2	0.17	< 5	< 10	26	< 5	38	14	165
Method Blank	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	< 2	< 0.01	< 5	< 10	< 2	< 5	< 1	< 1	< 5

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
Method Blank	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	< 2	< 0.01	< 5	< 10	< 2	< 5	< 1	< 1	< 5
Method Blank	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	< 2	< 0.01	< 5	< 10	< 2	< 5	< 1	< 1	< 5
Method Blank	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	< 2	< 0.01	< 5	< 10	< 2	< 5	< 1	1	< 5
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Date Submitted: 15-Nov-17
Invoice No.: A17-13024
Invoice Date: 07-Dec-17
Your Reference: EAST BULL

Pavey Ark Minerals Inc.
100 Broad Leaf Cresent
Ancaster ON L9G 3R8
Canada

ATTN: Richard H. Sutcliffe

CERTIFICATE OF ANALYSIS

36 Core samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1C-OES 50g Fire Assay ICPOES

Code 1F2 Total Digestion ICP(TOTAL)

REPORT **A17-13024**

This report may be reproduced without our consent. If only selected portions of the report are reproduced, permission must be obtained. If no instructions were given at time of sample submittal regarding excess material, it will be discarded within 90 days of this report. Our liability is limited solely to the analytical cost of these analyses. Test results are representative only of material submitted for analysis.

Notes:

Values which exceed the upper limit should be assayed for accurate numbers.

CERTIFIED BY:

A handwritten signature in black ink, appearing to read "Emmanuel Esemé". The signature is stylized with a large, sweeping 'E' and 'S'.

Emmanuel Esemé , Ph.D.
Quality Control

ACTIVATION LABORATORIES LTD.
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E-MAIL Ancaster@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

Analyte Symbol	Au	Pd	Pt	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na
Unit Symbol	ppb	ppb	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%
Lower Limit	2	5	5	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01
Method Code	FA-ICP	FA-ICP	FA-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
677165	16	16	< 5	< 0.3	9.34	< 3	184	< 1	< 2	6.43	< 0.3	40	26	238	5.72	18	< 1	0.68	2.88	21	865	< 1	2.24
677166	< 2	16	13	< 0.3	8.78	< 3	335	< 1	< 2	5.19	< 0.3	53	24	46	7.78	17	< 1	0.82	3.71	32	1090	< 1	2.19
677167	2	11	14	< 0.3	4.75	< 3	61	< 1	< 2	5.01	0.3	123	47	42	12.1	10	2	0.17	8.90	19	1780	< 1	0.42
677168	< 2	13	11	< 0.3	4.20	< 3	< 7	< 1	< 2	5.21	0.8	122	55	27	11.4	9	1	0.01	10.8	4	1620	< 1	0.06
677169	< 2	< 5	< 5	< 0.3	4.95	< 3	194	2	< 2	1.10	< 0.3	3	16	2	0.94	9	< 1	0.98	0.26	5	158	2	4.26
677170	70	575	442	0.7	2.61	174	84	< 1	< 2	3.05	0.5	191	2570	2630	10.3	7	< 1	0.16	13.3	26	1270	< 1	0.06
677171	3	238	257	< 0.3	4.73	< 3	< 7	< 1	< 2	4.79	0.4	127	90	15	10.7	10	1	0.02	10.5	17	1680	< 1	0.08
677172	3	434	909	< 0.3	6.23	< 3	159	< 1	< 2	4.42	0.7	116	84	13	10.5	11	< 1	0.57	8.67	44	1630	< 1	0.66
677173	22	1480	651	< 0.3	5.19	< 3	20	< 1	< 2	4.47	0.5	133	86	281	11.5	12	1	0.11	10.2	33	1670	< 1	0.10
677174	88	2070	856	0.5	5.42	< 3	214	< 1	< 2	4.43	0.7	116	290	1420	10.5	11	2	0.77	8.58	34	1480	< 1	0.55
677175	115	1120	434	0.7	6.29	< 3	155	< 1	< 2	3.61	0.6	98	216	1880	8.78	12	< 1	0.49	7.64	31	1410	< 1	1.58
677176	111	1570	577	0.8	6.06	< 3	66	< 1	< 2	2.60	0.7	125	217	2080	9.73	11	1	0.29	8.65	30	1430	< 1	0.54
677177	108	924	331	0.8	4.99	4	11	< 1	< 2	3.31	0.8	133	189	2070	10.0	9	1	0.07	9.07	16	1420	< 1	0.09
677178	44	554	190	< 0.3	3.83	< 3	< 7	< 1	< 2	4.82	0.5	110	349	803	9.46	8	< 1	0.03	9.85	13	1590	< 1	0.11
677179	97	1680	495	0.5	4.24	< 3	< 7	< 1	< 2	4.78	0.4	116	341	1580	9.74	9	1	0.03	9.82	16	1510	< 1	0.12
677180	86	1440	526	0.4	4.68	< 3	19	< 1	< 2	4.15	1.3	103	312	1250	9.12	10	2	0.08	9.24	24	1490	< 1	0.30
677181	63	31	11	0.7	5.79	< 3	50	< 1	< 2	3.71	0.7	113	190	1380	9.14	9	< 1	0.16	8.58	33	1460	< 1	0.81
677182	125	1330	530	1.2	5.91	< 3	75	< 1	< 2	3.99	1.1	112	186	2680	9.49	12	1	0.23	8.24	30	1390	< 1	0.69
677183	20	283	122	< 0.3	7.15	< 3	144	< 1	< 2	4.46	0.5	73	120	263	9.02	16	1	0.42	7.22	40	1340	< 1	1.13
677184	39	224	79	< 0.3	6.99	< 3	84	< 1	< 2	4.84	0.4	74	197	706	7.96	14	< 1	0.36	7.68	33	1310	< 1	1.16
677185	27	345	122	< 0.3	8.46	< 3	101	< 1	< 2	4.41	< 0.3	67	277	631	6.66	14	2	0.54	6.95	41	1090	< 1	1.51
677186	13	122	45	< 0.3	8.50	< 3	68	< 1	< 2	4.73	< 0.3	60	234	313	6.07	14	< 1	0.33	6.70	39	1040	< 1	1.58
677187	5	11	< 5	< 0.3	7.66	< 3	40	< 1	< 2	4.58	< 0.3	66	381	168	6.65	11	< 1	0.16	7.62	39	1160	< 1	1.27
677188	4	< 5	< 5	< 0.3	7.41	< 3	51	< 1	< 2	4.42	< 0.3	71	457	158	7.00	13	1	0.27	8.00	43	1240	< 1	1.14
677189	< 2	< 5	< 5	0.4	6.01	< 3	261	2	< 2	1.11	< 0.3	3	14	6	0.92	9	< 1	1.34	0.23	6	156	2	4.25
677190	113	889	111	< 0.3	8.82	< 3	51	< 1	< 2	6.73	0.3	55	145	438	4.94	11	< 1	0.17	5.91	18	878	< 1	1.39
677191	3	14	< 5	< 0.3	7.96	< 3	76	< 1	< 2	3.96	< 0.3	68	163	103	7.38	13	1	0.40	7.35	42	1270	< 1	1.36
677192	39	425	170	0.3	4.56	< 3	19	< 1	< 2	4.06	< 0.3	94	190	897	8.74	8	1	0.09	10.4	15	1420	< 1	0.40
677193	44	111	44	< 0.3	3.05	< 3	< 7	< 1	< 2	5.34	< 0.3	99	151	993	8.81	7	1	0.01	10.6	5	1570	< 1	0.09
677194	201	3190	1120	1.1	2.52	< 3	< 7	< 1	< 2	5.27	1.0	108	128	3240	8.42	5	1	0.01	11.4	4	1490	< 1	0.08
677195	192	4610	1600	0.9	7.72	< 3	103	< 1	< 2	1.23	0.5	115	52	2720	10.1	14	< 1	0.21	7.81	35	1320	< 1	0.93
677196	109	2030	706	0.5	5.06	< 3	< 7	< 1	< 2	3.99	< 0.3	96	48	1520	9.41	10	1	0.03	9.65	31	1600	< 1	0.18
677197	103	2360	841	< 0.3	4.82	< 3	< 7	< 1	< 2	4.50	< 0.3	92	49	859	9.65	9	1	0.02	9.89	28	1660	< 1	0.17
677198	77	921	335	< 0.3	5.61	< 3	125	< 1	< 2	4.64	< 0.3	83	284	1130	8.93	10	1	0.34	8.49	27	1550	< 1	0.73
677199	73	1610	571	< 0.3	6.70	3	275	< 1	< 2	4.08	0.7	69	242	1010	9.28	14	2	0.76	7.52	35	1480	< 1	0.78
677200	19	982	346	< 0.3	6.92	< 3	152	< 1	< 2	3.75	< 0.3	59	41	570	10.2	17	2	0.45	6.85	32	1480	< 1	1.48

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
677165	65	0.050	4	< 5	0.10	19	319	3	0.35	< 5	< 10	130	< 5	20	45	74
677166	88	0.033	< 3	< 5	0.01	23	316	< 2	0.35	< 5	< 10	215	< 5	15	54	45
677167	433	0.010	< 3	< 5	0.08	22	46	< 2	0.13	< 5	< 10	89	< 5	6	85	16
677168	653	0.009	25	< 5	0.27	16	14	< 2	0.09	< 5	< 10	62	< 5	4	139	15
677169	12	0.010	7	< 5	< 0.01	< 4	87	< 2	0.15	< 5	< 10	17	< 5	23	10	133
677170	3600	0.025	6	< 5	1.60	18	26	< 2	0.30	< 5	< 10	124	< 5	9	81	21
677171	672	0.010	3	< 5	0.03	14	10	< 2	0.08	< 5	< 10	63	< 5	5	96	15
677172	488	0.009	5	< 5	0.01	17	90	< 2	0.12	< 5	< 10	75	< 5	6	113	15
677173	709	0.017	3	< 5	0.04	17	11	2	0.15	< 5	< 10	85	< 5	7	121	24
677174	759	0.014	< 3	< 5	0.19	30	61	< 2	0.19	< 5	< 10	132	< 5	8	100	23
677175	577	0.011	< 3	< 5	0.23	27	154	< 2	0.16	< 5	< 10	127	< 5	7	88	18
677176	619	0.006	< 3	< 5	0.25	26	50	< 2	0.10	< 5	< 10	103	< 5	3	102	13
677177	508	0.007	< 3	< 5	0.26	28	8	< 2	0.12	< 5	10	118	< 5	4	80	12
677178	423	0.007	< 3	< 5	0.11	33	11	2	0.13	< 5	< 10	128	< 5	5	69	12
677179	655	0.004	< 3	< 5	0.25	31	11	< 2	0.11	< 5	< 10	118	< 5	4	68	9
677180	537	0.006	< 3	< 5	0.16	31	26	< 2	0.11	< 5	< 10	115	< 5	4	89	11
677181	469	0.004	< 3	< 5	0.44	27	78	< 2	0.10	< 5	< 10	103	< 5	3	84	9
677182	593	0.015	< 3	< 5	0.60	25	84	< 2	0.15	< 5	< 10	108	< 5	7	87	23
677183	245	0.018	< 3	< 5	0.09	25	167	< 2	0.28	< 5	< 10	151	< 5	10	72	32
677184	367	0.008	< 3	< 5	0.13	23	182	< 2	0.12	< 5	< 10	100	< 5	5	68	15
677185	312	0.003	< 3	< 5	0.11	19	302	< 2	0.08	< 5	< 10	74	< 5	3	68	7
677186	270	0.003	< 3	< 5	0.04	19	313	5	0.08	< 5	< 10	71	< 5	2	62	6
677187	201	0.003	< 3	< 5	0.02	21	223	< 2	0.07	< 5	< 10	76	< 5	2	70	5
677188	231	0.003	< 3	< 5	0.02	20	199	6	0.07	< 5	< 10	73	< 5	2	77	6
677189	5	0.010	6	< 5	< 0.01	< 4	105	< 2	0.15	< 5	< 10	17	< 5	31	9	158
677190	636	0.003	< 3	< 5	0.12	26	168	< 2	0.07	< 5	< 10	89	< 5	3	41	7
677191	189	0.005	< 3	< 5	0.02	20	290	< 2	0.08	< 5	< 10	80	< 5	3	83	8
677192	427	0.006	11	< 5	0.13	34	61	5	0.11	< 5	< 10	121	< 5	4	77	11
677193	428	0.005	< 3	< 5	0.11	39	11	< 2	0.11	< 5	< 10	141	< 5	4	67	9
677194	1450	0.006	28	< 5	0.41	41	10	< 2	0.13	< 5	< 10	146	< 5	4	120	11
677195	1050	0.005	< 3	< 5	0.36	23	123	< 2	0.09	< 5	< 10	84	< 5	2	128	9
677196	730	0.004	< 3	< 5	0.19	31	12	< 2	0.08	< 5	< 10	107	< 5	3	116	7
677197	590	0.004	< 3	< 5	0.11	36	13	< 2	0.10	< 5	< 10	119	< 5	3	115	8
677198	400	0.006	< 3	< 5	0.21	37	155	< 2	0.12	< 5	< 10	122	< 5	4	104	10
677199	442	0.004	< 3	< 5	0.15	34	216	< 2	0.11	< 5	< 10	109	< 5	3	125	9
677200	276	0.005	< 3	< 5	0.18	34	233	< 2	0.17	< 5	< 10	122	< 5	3	111	10

Analyte Symbol	Au	Pd	Pt	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na
Unit Symbol	ppb	ppb	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%
Lower Limit	2	5	5	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01
Method Code	FA-ICP	FA-ICP	FA-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
GXR-1 Meas				32.0	2.12	426	692	1	1390	0.92	3.0	8	13	1180	24.2	15	9	0.05	0.22	8	926	15	0.05
GXR-1 Cert				31.0	3.52	427	750	1.22	1380	0.960	3.30	8.20	12.0	1110	23.6	13.8	3.90	0.050	0.217	8.20	852	18.0	0.0520
GXR-4 Meas				3.0	6.41	103	86	2	14	1.06	< 0.3	15	43	6430	3.04	17	< 1	2.59	1.71	11	150	316	0.52
GXR-4 Cert				4.0	7.20	98.0	1640	1.90	19.0	1.01	0.860	14.6	64.0	6520	3.09	20.0	0.110	4.01	1.66	11.1	155	310	0.564
SDC-1 Meas					7.68	< 3	622	3		1.06		19	45	34	4.65	22	< 1	2.66	0.97	34	879		1.53
SDC-1 Cert					8.34	0.220	630	3.00		1.00		18.0	64.00	30.000	4.82	21.00	0.20	2.72	1.02	34	880.00		1.52
GXR-6 Meas				0.3	12.9	220	> 1000	1	< 2	0.20	< 0.3	14	47	66	5.47	30	< 1	1.81	0.61	35	1040	< 1	0.10
GXR-6 Cert				1.30	17.7	330	1300	1.40	0.290	0.180	1.00	13.8	96.0	66.0	5.58	35.0	0.0680	1.87	0.609	32.0	1010	2.40	0.104
DNC-1a Meas							97					56	117	96		13				5			
DNC-1a Cert							118					57	270	100		15				5.2			
PK2 Meas	4870	6090	4860																				
PK2 Cert	4790	5918.0 00	4749.0 00																				
SBC-1 Meas						21	642	3	< 2		0.5	23	87	31		27				164		2	
SBC-1 Cert						25.7	788.0	3.20	0.70		0.40	22.7	109	31.0000		27.0				163		2	
SdAR-M2 (U.S.G.S.) Meas							939	7	< 2		5.5	14	51	239		17	2			18		13	
SdAR-M2 (U.S.G.S.) Cert							990	6.6	1.05		5.1	12.4	49.6	236.00 00		17.6	1.44			18		13	
CDN-PGMS-28 Meas	191	1870	1590																				
CDN-PGMS-28 Cert	193.000	1750	1510																				
677169 Orig				< 0.3	6.32	< 3	225	2	< 2	1.18	< 0.3	3	13	2	0.98	9	< 1	1.02	0.31	6	157	2	4.30
677169 Dup				< 0.3	3.59	< 3	164	2	< 2	1.03	< 0.3	3	19	2	0.91	9	< 1	0.94	0.21	5	158	2	4.22
677174 Orig	87	2070	865																				
677174 Dup	89	2070	847																				
677184 Orig	40	229	82																				
677184 Dup	38	220	75																				
677191 Orig				< 0.3	7.86	4	75	< 1	< 2	3.92	< 0.3	68	166	99	7.32	13	1	0.39	7.29	42	1260	< 1	1.34
677191 Dup				< 0.3	8.06	< 3	78	< 1	< 2	4.00	< 0.3	69	159	107	7.45	14	1	0.41	7.41	43	1280	< 1	1.38
677200 Orig				< 0.3	6.90	5	152	< 1	< 2	3.75	< 0.3	60	44	571	10.2	17	2	0.45	6.84	32	1480	< 1	1.47
677200 Dup				< 0.3	6.95	< 3	152	< 1	< 2	3.76	< 0.3	58	38	570	10.2	17	1	0.45	6.85	33	1470	< 1	1.48
Method Blank				< 0.3	< 0.01	< 3	< 7	< 1	< 2	< 0.01	< 0.3	< 1		< 1	< 0.01	< 1	< 1	< 0.01	< 0.01	< 1		< 1	< 0.01
Method Blank				< 0.3	< 0.01	< 3	< 7	< 1	< 2	< 0.01	< 0.3	< 1		< 1	< 0.01	< 1	< 1	< 0.01	< 0.01	< 1		< 1	< 0.01
Method Blank				< 0.3	< 0.01	< 3	< 7	< 1	< 2	< 0.01	< 0.3	< 1		< 1	< 0.01	< 1	< 1	< 0.01	< 0.01	< 1		< 1	< 0.01
Method Blank				< 0.3	< 0.01	< 3	< 7	< 1	< 2	< 0.01	< 0.3	< 1		< 1	< 0.01	< 1	< 1	< 0.01	< 0.01	< 1		< 1	< 0.01
Method Blank	< 2	< 5	< 5																				
Method Blank	< 2	< 5	< 5																				

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
GXR-1 Meas	45	0.061	758	21	0.26	< 4	298	11	0.03	< 5	40	89	134	35	750	24
GXR-1 Cert	41.0	0.0650	730	122	0.257	1.58	275	13.0	0.036	0.390	34.9	80.0	164	32.0	760	38.0
GXR-4 Meas	44	0.131	41	< 5	1.77	8	215	< 2	0.29	< 5	< 10	86	29	17	73	41
GXR-4 Cert	42.0	0.120	52.0	4.80	1.77	7.70	221	0.970	0.29	3.20	6.20	87.0	30.8	14.0	73.0	186
SDC-1 Meas	36	0.054	21	< 5		16	173		0.17	< 5	< 10	41	< 5		95	31
SDC-1 Cert	38.0	0.0690	25.00	0.54		17.00	180.00		0.606	0.70	3.10	102.00	0.80		103.00	290.00
GXR-6 Meas	26	0.032	94	< 5	0.02	29	43	< 2		< 5	< 10	110	< 5	16	125	63
GXR-6 Cert	27.0	0.0350	101	3.60	0.0160	27.6	35.0	0.0180		2.20	1.54	186	1.90	14.0	118	110
DNC-1a Meas	247		< 3	< 5		32	133		0.29			140		19	54	35
DNC-1a Cert	247		6.3	0.96		31	144		0.29			148		18.0	70	38.0
PK2 Meas																
PK2 Cert																
SBC-1 Meas	87		27	< 5		22	181		0.51	< 5	< 10	216	< 5	41	178	116
SBC-1 Cert	83		35.0	1.01		20.0	178.0		0.51	0.89	5.76	220.0	1.60	36.5	186	134.0
SdAR-M2 (U.S.G.S.) Meas	52		787			< 4	129				< 10	26	7	27	771	116
SdAR-M2 (U.S.G.S.) Cert	49		808			4.1	144				2.53	25.2	2.8	32.7	760	259
CDN-PGMS-28 Meas																
CDN-PGMS-28 Cert																
677169 Orig	12	0.011	9	< 5	< 0.01	< 4	116	< 2	0.15	< 5	< 10	17	< 5	34	10	135
677169 Dup	12	0.009	4	< 5	< 0.01	< 4	58	< 2	0.16	< 5	< 10	18	< 5	12	9	132
677174 Orig																
677174 Dup																
677184 Orig																
677184 Dup																
677191 Orig	187	0.005	< 3	< 5	0.02	20	283	< 2	0.08	< 5	< 10	80	< 5	3	82	8
677191 Dup	190	0.005	< 3	< 5	0.02	20	296	< 2	0.08	< 5	< 10	81	< 5	3	85	9
677200 Orig	276	0.005	< 3	< 5	0.18	34	231	< 2	0.16	< 5	< 10	122	< 5	3	111	10
677200 Dup	275	0.004	< 3	< 5	0.18	34	236	< 2	0.17	< 5	< 10	121	< 5	3	111	10
Method Blank	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	< 2	< 0.01	< 5	< 10	< 2	< 5	< 1	< 1	< 5
Method Blank	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	< 2	< 0.01	< 5	< 10	< 2	< 5	< 1	< 1	< 5
Method Blank	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	< 2	< 0.01	< 5	< 10	< 2	< 5	< 1	< 1	< 5
Method Blank	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	2	< 0.01	< 5	< 10	< 2	< 5	< 1	< 1	< 5
Method Blank																
Method Blank																



Date Submitted: 16-Nov-17
Invoice No.: A17-13082
Invoice Date: 02-Jan-18
Your Reference: EAST BULL

Pavey Ark Minerals Inc.
100 Broad Leaf Crescent
Ancaster ON L9G 3R8
Canada

ATTN: Richard H. Sutcliffe

CERTIFICATE OF ANALYSIS

38 Core samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1F2-Tbay Total Digestion ICP(TOTAL)

REPORT **A17-13082**

This report may be reproduced without our consent. If only selected portions of the report are reproduced, permission must be obtained. If no instructions were given at time of sample submittal regarding excess material, it will be discarded within 90 days of this report. Our liability is limited solely to the analytical cost of these analyses. Test results are representative only of material submitted for analysis.

Notes:

Values which exceed the upper limit should be assayed for accurate numbers.

CERTIFIED BY:

A handwritten signature in black ink, appearing to read "Elitsa Hrischeva". The signature is fluid and cursive, written over a horizontal line.

Elitsa Hrischeva, Ph.D.
Quality Control

ACTIVATION LABORATORIES LTD.
1201 Walsh Street West, Thunder Bay, Ontario, Canada, P7E 4X6
TELEPHONE +807 622-6707 or +1.888.228.5227 FAX +1.905.648.9613
E-MAIL Tbay@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

Date Submitted: 16-Nov-17
Invoice No.: A17-13082
Invoice Date: 02-Jan-18
Your Reference: EAST BULL

**Pavey Ark Minerals Inc.
100 Broad Leaf Crescent
Ancaster ON L9G 3R8
Canada**

ATTN: Richard H. Sutcliffe

CERTIFICATE OF ANALYSIS

38 Core samples were submitted for analysis.

The following analytical package(s) were requested: Code 1C-OES 50g Fire Assay ICPOES

REPORT **A17-13082**

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Notes:

Values which exceed the upper limit should be assayed for accurate numbers.

CERTIFIED BY:



Elitsa Hrischeva, Ph.D.
Quality Control

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E-MAIL Ancaster@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

Results

Activation Laboratories Ltd.

Report: A17-13082

Analyte Symbol	Au	Pd	Pt	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na
Unit Symbol	ppb	ppb	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%
Lower Limit	2	5	5	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01
Method Code	FA-ICP	FA-ICP	FA-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
677401	27	285	71	0.6	5.88	17	73	< 1	< 2	5.45	1.2	101	107	939	10.5	11	4	0.32	9.83	35	1220	< 1	0.08
677402	25	298	82	0.5	5.94	< 3	< 7	< 1	< 2	4.22	1.8	138	143	790	11.2	13	< 1	0.02	12.1	10	1210	< 1	0.05
677403	34	381	81	0.8	5.80	< 3	16	< 1	< 2	4.59	1.7	151	238	1360	10.5	8	< 1	0.09	11.3	25	1320	< 1	0.07
677404	28	345	76	0.6	6.47	< 3	8	< 1	< 2	4.45	0.4	141	279	1200	10.7	8	< 1	0.06	11.5	33	1280	< 1	0.07
677405	39	342	93	0.6	5.86	< 3	< 7	< 1	3	4.13	1.7	155	377	2510	10.1	12	< 1	0.02	12.1	22	1170	< 1	0.05
677406	19	395	94	< 0.3	8.12	< 3	97	< 1	< 2	4.83	0.5	97	149	678	10.6	12	< 1	0.48	9.90	53	1310	< 1	0.12
677407	30	342	89	0.5	4.88	< 3	< 7	< 1	< 2	4.40	0.8	98	166	791	9.28	6	< 1	0.03	11.2	20	1130	< 1	0.05
677408	22	323	78	0.6	4.72	< 3	< 7	< 1	< 2	3.37	0.5	84	116	721	8.26	8	< 1	0.02	9.08	22	977	< 1	0.05
677409	33	420	174	0.4	7.60	< 3	134	< 1	< 2	5.98	0.6	51	198	689	5.60	15	< 1	0.52	5.91	28	772	< 1	1.32
677410	39	688	209	0.6	9.49	< 3	136	< 1	< 2	8.50	1.0	64	35	1230	4.72	18	1	0.57	2.90	24	546	< 1	1.79
677411	22	447	157	0.3	10.3	< 3	155	< 1	< 2	7.85	0.4	52	51	800	5.29	18	< 1	0.58	3.80	34	680	< 1	1.71
677412	40	977	335	0.8	7.88	< 3	125	< 1	3	7.99	1.2	79	56	1660	7.07	21	< 1	0.42	3.49	17	837	< 1	1.84
677413	7	276	128	< 0.3	8.32	< 3	168	< 1	< 2	6.64	0.5	61	63	290	8.81	18	5	0.57	4.36	20	1090	< 1	1.36
677414	< 2	< 5	< 5	< 0.3	7.30	4	224	< 1	< 2	7.55	0.4	46	120	94	7.54	18	< 1	0.68	3.98	14	1130	< 1	1.30
677415	96	920	95	< 0.3	8.98	< 3	50	< 1	< 2	7.07	< 0.3	57	222	469	5.27	13	3	0.19	6.07	17	933	< 1	1.42
677416	< 2	< 5	< 5	0.4	7.31	4	152	2	< 2	0.96	< 0.3	4	34	13	1.04	10	< 1	0.63	0.30	8	153	5	4.91
677417	73	591	460	1.0	2.84	151	81	< 1	< 2	3.19	0.7	196	2520	2840	11.4	7	< 1	0.19	13.9	26	1370	< 1	0.07
677418	43	372	76	0.5	8.91	< 3	112	< 1	< 2	6.26	0.6	91	729	1320	9.19	15	< 1	0.33	6.31	29	1210	< 1	0.92
677419	25	241	80	< 0.3	9.73	4	149	< 1	< 2	6.02	0.4	71	375	816	6.89	14	< 1	0.50	6.23	35	1010	< 1	1.38
677420	85	517	171	1.0	9.02	4	102	< 1	< 2	6.48	1.1	86	190	2460	6.89	16	< 1	0.38	5.25	25	955	< 1	1.41
677421	40	816	328	0.5	7.06	< 3	57	< 1	3	5.77	1.2	80	291	1140	7.49	12	< 1	0.21	6.50	24	1130	< 1	1.05
677422	53	397	135	0.5	8.12	< 3	74	< 1	< 2	6.75	0.6	63	293	1210	6.63	13	< 1	0.28	6.03	22	1110	< 1	1.42
677423	72	1020	530	1.1	7.61	< 3	85	< 1	< 2	5.96	0.8	70	283	2540	8.25	15	< 1	0.29	6.22	24	1310	< 1	1.32
677424	102	1600	957	1.3	5.37	< 3	34	< 1	< 2	5.94	1.3	97	383	2870	10.3	11	1	0.13	8.11	24	1660	< 1	0.52
677425	68	712	444	0.6	5.86	< 3	73	< 1	< 2	5.72	0.7	83	326	1420	9.33	14	< 1	0.22	6.82	23	1480	< 1	0.88
677426	98	799	489	0.9	4.62	< 3	46	< 1	< 2	5.08	0.7	92	468	1830	10.4	11	< 1	0.13	8.10	25	1740	< 1	0.57
677427	197	1210	599	0.7	5.49	< 3	35	< 1	< 2	4.79	1.1	91	397	2420	9.26	11	< 1	0.13	8.22	28	1640	< 1	0.66
677428	113	822	363	1.1	5.21	< 3	31	< 1	< 2	5.68	1.7	87	392	2580	9.06	11	< 1	0.12	8.43	24	1620	< 1	0.75
677429	77	438	143	1.0	5.44	3	47	< 1	< 2	5.78	1.3	99	311	2130	8.81	12	< 1	0.15	6.91	19	1410	< 1	1.45
677430	68	391	233	0.6	2.81	< 3	< 7	< 1	< 2	6.74	1.0	83	402	1590	9.83	8	< 1	0.03	10.00	15	1870	< 1	0.12
677431	68	271	118	0.9	7.80	< 3	60	< 1	< 2	5.19	1.0	81	261	2310	8.12	14	< 1	0.17	6.63	26	1350	< 1	1.78
677432	62	338	153	0.8	6.86	< 3	44	< 1	< 2	5.09	1.0	85	322	1830	8.45	13	< 1	0.12	6.99	25	1400	3	1.33
677433	66	318	103	0.7	6.98	< 3	64	< 1	9	5.79	1.4	84	342	1980	8.04	14	< 1	0.17	6.72	22	1370	< 1	1.42
677434	88	318	94	1.3	6.68	< 3	72	< 1	< 2	5.20	0.5	126	294	3000	9.18	13	< 1	0.25	6.00	24	1360	< 1	1.57
677435	66	389	192	1.5	7.31	225	79	< 1	< 2	4.57	2.5	84	337	1910	9.22	14	< 1	0.45	7.99	52	1510	< 1	1.49
677436	87	761	302	1.3	6.67	6	72	< 1	< 2	5.91	0.6	104	308	3270	9.96	17	< 1	0.27	7.74	25	1770	< 1	1.09
677437	103	605	273	1.2	7.03	4	83	< 1	< 2	5.32	2.1	96	227	3190	10.2	12	< 1	0.25	7.33	27	1650	< 1	1.29
677438	144	574	455	1.4	7.61	< 3	91	< 1	< 2	7.09	1.5	86	199	3440	8.75	15	< 1	0.40	6.48	19	1470	< 1	1.49

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
677401	773	0.010	13	< 5	0.67	9	254	< 2	0.09	< 5	< 10	53	8	5	165	17
677402	680	0.006	5	< 5	0.89	8	14	4	0.04	< 5	< 10	41	< 5	2	182	9
677403	888	0.006	5	< 5	0.84	11	35	3	0.05	< 5	< 10	46	< 5	2	194	8
677404	764	0.006	4	< 5	0.91	8	62	8	0.04	< 5	< 10	33	< 5	2	162	5
677405	602	0.008	< 3	< 5	1.03	8	4	< 2	0.06	< 5	< 10	38	< 5	2	192	9
677406	650	0.007	5	< 5	0.27	7	208	10	0.06	5	< 10	36	< 5	3	156	7
677407	734	0.004	< 3	< 5	0.72	6	6	6	0.02	< 5	< 10	24	< 5	< 1	149	< 5
677408	561	0.004	6	< 5	0.56	5	2	7	0.02	< 5	< 10	20	< 5	< 1	136	< 5
677409	389	0.006	4	< 5	0.27	18	235	< 2	0.09	< 5	< 10	80	< 5	4	74	10
677410	554	0.005	< 3	< 5	0.52	< 4	410	5	0.05	< 5	< 10	26	< 5	2	70	6
677411	497	0.006	12	< 5	0.26	4	314	9	0.06	< 5	< 10	31	< 5	2	78	7
677412	607	0.020	4	< 5	0.78	12	353	< 2	0.23	< 5	< 10	148	< 5	8	79	27
677413	321	0.027	10	< 5	0.36	28	225	4	0.29	< 5	< 10	153	< 5	13	86	35
677414	124	0.031	5	< 5	0.03	37	242	12	0.31	< 5	< 10	183	< 5	16	62	47
677415	678	0.003	< 3	< 5	0.12	26	169	4	0.07	< 5	< 10	95	< 5	3	48	7
677416	9	0.014	6	< 5	< 0.01	4	131	< 2	0.17	< 5	< 10	19	< 5	33	28	199
677417	3840	0.027	12	< 5	1.76	19	27	10	0.27	< 5	< 10	124	< 5	9	91	24
677418	745	0.010	< 3	< 5	0.37	13	186	< 2	0.13	< 5	< 10	82	< 5	4	143	15
677419	530	0.003	< 3	< 5	0.15	9	214	3	0.04	< 5	< 10	43	< 5	1	106	< 5
677420	845	0.009	4	< 5	0.68	13	212	13	0.09	< 5	< 10	56	< 5	4	85	15
677421	984	0.006	4	< 5	0.53	20	134	14	0.11	< 5	< 10	88	< 5	4	73	10
677422	579	0.006	6	< 5	0.24	19	183	15	0.10	< 5	< 10	84	< 5	4	73	11
677423	717	0.015	4	< 5	0.65	29	154	9	0.19	< 5	< 10	128	< 5	8	87	23
677424	1110	0.011	4	< 5	0.78	32	74	7	0.15	< 5	< 10	122	< 5	6	101	17
677425	476	0.025	6	< 5	0.56	37	99	5	0.40	< 5	< 10	212	< 5	14	84	38
677426	652	0.026	5	< 5	0.65	39	37	< 2	0.31	< 5	< 10	178	< 5	13	90	46
677427	815	0.007	< 3	< 5	0.39	33	51	5	0.12	< 5	< 10	116	< 5	5	95	11
677428	1080	0.005	< 3	< 5	0.49	38	60	< 2	0.13	< 5	< 10	125	< 5	5	82	10
677429	1190	0.023	4	< 5	0.90	29	99	3	0.35	< 5	< 10	164	< 5	12	74	34
677430	719	0.004	7	< 5	0.35	42	6	8	0.14	< 5	< 10	132	< 5	6	81	10
677431	849	0.005	6	< 5	0.48	28	131	< 2	0.11	< 5	< 10	101	< 5	4	73	7
677432	804	0.006	9	< 5	0.45	33	98	11	0.12	< 5	< 10	111	< 5	6	71	10
677433	862	0.003	< 3	< 5	0.59	30	133	16	0.10	< 5	< 10	98	< 5	5	71	7
677434	1230	0.004	9	< 5	1.50	25	145	11	0.09	< 5	< 10	92	< 5	5	75	6
677435	770	0.005	205	< 5	0.43	29	117	< 2	0.13	< 5	< 10	98	7	6	588	10
677436	1190	0.005	9	< 5	0.78	36	123	6	0.13	< 5	< 10	118	< 5	6	87	11
677437	1100	0.019	5	< 5	0.67	32	120	13	0.18	< 5	< 10	122	< 5	9	90	28
677438	892	0.008	8	< 5	0.68	36	181	9	0.15	< 5	< 10	129	< 5	7	81	15

Analyte Symbol	Au	Pd	Pt	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na
Unit Symbol	ppb	ppb	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%
Lower Limit	2	5	5	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01
Method Code	FA-ICP	FA-ICP	FA-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
GXR-1 Meas				31.6	1.99	426	650	1	1390	0.89	3.1	8	21	1200	24.1	16	6	0.06	0.21	8	921	15	0.05
GXR-1 Cert				31.0	3.52	427	750	1.22	1380	0.960	3.30	8.20	12.0	1110	23.6	13.8	3.90	0.050	0.217	8.20	852	18.0	0.0520
GXR-1 Meas				31.5	1.99	434	613	1	1370	0.87	3.4	8	16	1140	23.5	6	5	0.04	0.20	7	838	14	0.03
GXR-1 Cert				31.0	3.52	427	750	1.22	1380	0.960	3.30	8.20	12.0	1110	23.6	13.8	3.90	0.050	0.217	8.20	852	18.0	0.0520
DH-1a Meas																							
DH-1a Cert																							
GXR-4 Meas				3.4	6.52	99	158	2	8	1.05	0.4	15	30	6430	3.05	15	< 1	2.48	1.67	11	147	327	0.52
GXR-4 Cert				4.0	7.20	98.0	1640	1.90	19.0	1.01	0.860	14.6	64.0	6520	3.09	20.0	0.110	4.01	1.66	11.1	155	310	0.564
GXR-4 Meas				3.5	7.05	110	104	2	11	1.11	0.3	14	45	7010	3.28	20	< 1	3.00	1.79	12	154	345	0.53
GXR-4 Cert				4.0	7.20	98.0	1640	1.90	19.0	1.01	0.860	14.6	64.0	6520	3.09	20.0	0.110	4.01	1.66	11.1	155	310	0.564
SDC-1 Meas					8.17	< 3	630	3		1.10		19	40	31	4.90	23	< 1	1.44	1.00	35	877		1.60
SDC-1 Cert					8.34	0.220	630	3.00		1.00		18.0	64.00	30.000	4.82	21.00	0.20	2.72	1.02	34	880.00		1.52
SDC-1 Meas					8.37	< 3	634	3		1.12		17	46	33	4.99	23	< 1	2.44	1.03	34	863		1.54
SDC-1 Cert					8.34	0.220	630	3.00		1.00		18.0	64.00	30.000	4.82	21.00	0.20	2.72	1.02	34	880.00		1.52
GXR-6 Meas				0.3	13.7	236	> 1000	1	< 2	0.20	< 0.3	13	46	72	5.80	34	< 1	1.93	0.64	35	1050	< 1	0.09
GXR-6 Cert				1.30	17.7	330	1300	1.40	0.290	0.180	1.00	13.8	96.0	66.0	5.58	35.0	0.0680	1.87	0.609	32.0	1010	2.40	0.104
OREAS 14P Meas												703		9530	33.0								
OREAS 14P Cert												750		9970	37.2								
Oreas 72a (4 Acid Digest) Meas						< 3						150	202	323	9.57								
Oreas 72a (4 Acid Digest) Cert						14.7						157	228	316	9.63								
OREAS 97 (4 Acid) Meas				19.1					25			61		> 10000									
OREAS 97 (4 Acid) Cert				19.6					40.1			62.9		63100.00									
OREAS 98 (4 Acid) Meas				39.6					67			109		> 10000									
OREAS 98 (4 Acid) Cert				45.1					97.2			121		148000.0									
DNC-1a Meas							92					55	165	100		15					4		
DNC-1a Cert							118					57	270	100		15					5.2		
DNC-1a Meas							91					48	167	98		11					4		
DNC-1a Cert							118					57	270	100		15					5.2		
PK2 Meas	4870	6000	4710																				
PK2 Cert	4790	5918.000	4749.000																				
PK2 Meas	4740	5850	4710																				
PK2 Cert	4790	5918.000	4749.000																				
SBC-1 Meas						31	729	3	< 2		0.7	23	99	34		28					153		2
SBC-1 Cert						25.7	788.0	3.20	0.70		0.40	22.7	109	31.0000		27.0					163		2

Analyte Symbol	Au	Pd	Pt	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na
Unit Symbol	ppb	ppb	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%
Lower Limit	2	5	5	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01
Method Code	FA-ICP	FA-ICP	FA-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
SBC-1 Meas						26	527	3	< 2		0.4	22	70	34		29				157		2	
SBC-1 Cert						25.7	788.0	3.20	0.70		0.40	22.7	109	31.0000		27.0				163		2	
OREAS 45d (4-Acid) Meas					7.85	5	175	< 1	< 2	0.20		30	512	383	14.3	23		0.43	0.24	21	498	< 1	0.08
OREAS 45d (4-Acid) Cert					8.150	13.8	183.0	0.79	0.31	0.185		29.50	549	371	14.5	21.20		0.412	0.245	21.5	490.000	2.500	0.101
OREAS 923 (AQUA REGIA) Meas				1.5	7.52	< 3	412	3	12	0.51	0.5	23	75	4610	6.71	20		2.32	1.74	30	969	< 1	
OREAS 923 (AQUA REGIA) Cert				1.62	2.80	7.07	54	0.61	21.8	0.326	0.40	22.2	39.4	4248	5.91	8.01		0.322	1.43	23.4	850	0.84	
SdAR-M2 (U.S.G.S.) Meas							982	7	< 2		5.2	14	41	240		18	< 1			17		13	
SdAR-M2 (U.S.G.S.) Cert							990	6.6	1.05		5.1	12.4	49.6	236.0000		17.6	1.44			18		13	
SdAR-M2 (U.S.G.S.) Meas							> 1000	8	< 2		5.6	13	38	262		20	< 1			18		12	
SdAR-M2 (U.S.G.S.) Cert							990	6.6	1.05		5.1	12.4	49.6	236.0000		17.6	1.44			18		13	
Oreas 96 (Aqua Regia) Meas				11.2					10			48		> 10000									
Oreas 96 (Aqua Regia) Cert				11.50					27.9			49.2		39100.00									
CDN-PGMS-28 Meas	208	1780	1490																				
CDN-PGMS-28 Cert	193.000	1750	1510																				
CDN-PGMS-28 Meas	202	1800	1560																				
CDN-PGMS-28 Cert	193.000	1750	1510																				
677407 Orig				0.5	4.76	< 3	< 7	< 1	< 2	4.62	1.0	104	185	837	9.73	7	< 1	0.02	11.8	21	1190	< 1	0.05
677407 Dup				0.4	5.00	< 3	< 7	< 1	< 2	4.19	0.7	92	146	745	8.84	5	< 1	0.03	10.7	19	1060	< 1	0.05
677410 Orig	41	674	204																				
677410 Dup	37	702	214																				
677420 Orig	79	513	166																				
677420 Dup	90	521	175																				
677421 Orig				0.5	7.32	4	59	< 1	3	6.04	0.6	87	296	1190	7.84	14	< 1	0.22	6.78	25	1200	< 1	1.09
677421 Dup				0.4	6.80	< 3	55	< 1	3	5.49	1.8	74	286	1080	7.15	10	2	0.20	6.21	23	1070	< 1	1.01
677430 Orig	72	410	245																				
677430 Dup	63	372	222																				
Method Blank				< 0.3	0.01	< 3	< 7	< 1	< 2	< 0.01	< 0.3	< 1		< 1	< 0.01	< 1	< 1	< 0.01	< 0.01	< 1		< 1	< 0.01
Method Blank				< 0.3	0.01	< 3	< 7	< 1	< 2	< 0.01	< 0.3	< 1		< 1	< 0.01	< 1	< 1	< 0.01	< 0.01	< 1		< 1	< 0.01
Method Blank	< 2	< 5	< 5																				

Analyte Symbol	Au	Pd	Pt	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na
Unit Symbol	ppb	ppb	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%
Lower Limit	2	5	5	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01
Method Code	FA-ICP	FA-ICP	FA-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
Method Blank	< 2	< 5	< 5																				
Method Blank	< 2	< 5	10																				
Method Blank				< 0.3	< 0.01	< 3	< 7	< 1	< 2	< 0.01	< 0.3	< 1		< 1	< 0.01	< 1	< 1	< 0.01	< 0.01	< 1		< 1	< 0.01
Method Blank				< 0.3	< 0.01	3	< 7	< 1	< 2	< 0.01	< 0.3	< 1		< 1	< 0.01	< 1	< 1	< 0.01	< 0.01	< 1		< 1	< 0.01
Method Blank				< 0.3	< 0.01	< 3	< 7	< 1	< 2	< 0.01	< 0.3	< 1		< 1	< 0.01	< 1	< 1	< 0.01	< 0.01	< 1		< 1	< 0.01

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
GXR-1 Meas	40	0.063	771	24	0.26	< 4	297	18	0.03	5	40	88	163	34	794	27
GXR-1 Cert	41.0	0.0650	730	122	0.257	1.58	275	13.0	0.036	0.390	34.9	80.0	164	32.0	760	38.0
GXR-1 Meas	44	0.056	753	10	0.25	< 4	274	6	0.03	< 5	40	86	129	31	778	24
GXR-1 Cert	41.0	0.0650	730	122	0.257	1.58	275	13.0	0.036	0.390	34.9	80.0	164	32.0	760	38.0
DH-1a Meas											2610					
DH-1a Cert											2629					
GXR-4 Meas	44	0.137	52	< 5	1.82	8	211	8	0.29	< 5	< 10	89	32	15	73	44
GXR-4 Cert	42.0	0.120	52.0	4.80	1.77	7.70	221	0.970	0.29	3.20	6.20	87.0	30.8	14.0	73.0	186
GXR-4 Meas	57	0.137	47	5	1.94	8	220	< 2	0.30	< 5	< 10	94	37	17	72	46
GXR-4 Cert	42.0	0.120	52.0	4.80	1.77	7.70	221	0.970	0.29	3.20	6.20	87.0	30.8	14.0	73.0	186
SDC-1 Meas	36	0.057	22	< 5		16	177		0.07	< 5	< 10	29	< 5		105	20
SDC-1 Cert	38.0	0.0690	25.00	0.54		17.00	180.00		0.606	0.70	3.10	102.00	0.80		103.00	290.00
SDC-1 Meas	38	0.053	22	< 5		17	180		0.14	< 5	< 10	45	< 5		102	37
SDC-1 Cert	38.0	0.0690	25.00	0.54		17.00	180.00		0.606	0.70	3.10	102.00	0.80		103.00	290.00
GXR-6 Meas	28	0.033	97	< 5	0.02	31	43	< 2		< 5	< 10	115	< 5	16	132	67
GXR-6 Cert	27.0	0.0350	101	3.60	0.0160	27.6	35.0	0.0180		2.20	1.54	186	1.90	14.0	118	110
OREAS 14P Meas	> 10000															
OREAS 14P Cert	21000															
Oreas 72a (4 Acid Digest) Meas	6580				1.65											
Oreas 72a (4 Acid Digest) Cert	6930.00				1.74											
OREAS 97 (4 Acid) Meas			128	< 5	6.52										613	
OREAS 97 (4 Acid) Cert			147	9.23	6.07										646	
OREAS 98 (4 Acid) Meas			291	10	13.5										1300	
OREAS 98 (4 Acid) Cert			345	20.1	15.5										1360	
DNC-1a Meas	256		6	< 5		31	130		0.28			139		17	60	34
DNC-1a Cert	247		6.3	0.96		31	144		0.29			148		18.0	70	38.0
DNC-1a Meas	244		< 3	< 5		31	125		0.26			137		17	53	34
DNC-1a Cert	247		6.3	0.96		31	144		0.29			148		18.0	70	38.0
PK2 Meas																
PK2 Cert																
PK2 Meas																
PK2 Cert																
SBC-1 Meas	90		29	< 5		22	182		0.52	< 5	< 10	222	< 5	35	197	112
SBC-1 Cert	83		35.0	1.01		20.0	178.0		0.51	0.89	5.76	220.0	1.60	36.5	186	134.0
SBC-1 Meas	89		26	< 5		22	178		0.51	< 5	< 10	225	< 5	38	181	123
SBC-1 Cert	83		35.0	1.01		20.0	178.0		0.51	0.89	5.76	220.0	1.60	36.5	186	134.0
OREAS 45d	249	0.033	21	< 5	0.04	54	31		0.20	< 5	< 10	114	< 5	13	44	66

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
(4-Acid) Meas																
OREAS 45d (4-Acid) Cert	231.0	0.042	21.8	0.82	0.049	49.30	31.30		0.773	0.27	2.63	235.0	1.62	9.53	45.7	141
OREAS 923 (AQUA REGIA) Meas	42	0.062	70	< 5	0.72	14	43			< 5	< 10	99	8	31	348	132
OREAS 923 (AQUA REGIA) Cert	32.7	0.061	81	0.58	0.684	3.09	13.6			0.12	1.80	30.6	1.96	14.3	335	22.5
SdAR-M2 (U.S.G.S.) Meas	53		851			5	145				< 10	27	11	29	819	111
SdAR-M2 (U.S.G.S.) Cert	49		808			4.1	144				2.53	25.2	2.8	32.7	760	259
SdAR-M2 (U.S.G.S.) Meas	56		804			5	152				< 10	27	8	32	815	40
SdAR-M2 (U.S.G.S.) Cert	49		808			4.1	144				2.53	25.2	2.8	32.7	760	259
Oreas 96 (Aqua Regia) Meas			88	< 5	4.16											439
Oreas 96 (Aqua Regia) Cert			100	4.53	4.38											448
CDN-PGMS-28 Meas																
CDN-PGMS-28 Cert																
CDN-PGMS-28 Meas																
CDN-PGMS-28 Cert																
677407 Orig	766	0.004	4	< 5	0.76	6	7	8	0.02	< 5	< 10	25	< 5	< 1	154	< 5
677407 Dup	701	0.004	< 3	< 5	0.69	6	6	5	0.02	< 5	< 10	23	< 5	< 1	145	< 5
677410 Orig																
677410 Dup																
677420 Orig																
677420 Dup																
677421 Orig	1040	0.006	5	< 5	0.56	21	142	17	0.12	< 5	< 10	92	< 5	4	77	11
677421 Dup	928	0.006	3	< 5	0.50	19	126	11	0.11	< 5	< 10	83	< 5	4	69	9
677430 Orig																
677430 Dup																
Method Blank	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	< 2	< 0.01	< 5	< 10	< 2	< 5	< 1	< 1	< 5
Method Blank	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	< 2	< 0.01	< 5	< 10	< 2	< 5	< 1	< 1	< 5
Method Blank																
Method Blank																
Method Blank	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	< 2	< 0.01	< 5	< 10	< 2	< 5	< 1	< 1	< 5
Method Blank	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	< 2	< 0.01	< 5	< 10	< 2	< 5	< 1	< 1	< 5

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
Method Blank	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	< 2	< 0.01	< 5	< 10	< 2	< 5	< 1	< 1	< 5



Date Submitted: 16-Nov-17
Invoice No.: A17-13086
Invoice Date: 28-Dec-17
Your Reference: EAST BULL

Pavey Ark Minerals Inc.
100 Broad Leaf Crescent
Ancaster ON L9G 3R8
Canada

ATTN: Richard H. Sutcliffe

CERTIFICATE OF ANALYSIS

64 Rock samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1F2-Tbay Total Digestion ICP(TOTAL)

REPORT **A17-13086**

This report may be reproduced without our consent. If only selected portions of the report are reproduced, permission must be obtained. If no instructions were given at time of sample submittal regarding excess material, it will be discarded within 90 days of this report. Our liability is limited solely to the analytical cost of these analyses. Test results are representative only of material submitted for analysis.

Notes:

Values which exceed the upper limit should be assayed for accurate numbers.

CERTIFIED BY:

A handwritten signature in black ink, appearing to read "Elitsa Hrischeva". The signature is fluid and cursive, written over a horizontal line.

Elitsa Hrischeva, Ph.D.
Quality Control

ACTIVATION LABORATORIES LTD.
1201 Walsh Street West, Thunder Bay, Ontario, Canada, P7E 4X6
TELEPHONE +807 622-6707 or +1.888.228.5227 FAX +1.905.648.9613
E-MAIL Tbay@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

Date Submitted: 16-Nov-17
Invoice No.: A17-13086
Invoice Date: 28-Dec-17
Your Reference: EAST BULL

**Pavey Ark Minerals Inc.
100 Broad Leaf Crescent
Ancaster ON L9G 3R8
Canada**

ATTN: Richard H. Sutcliffe

CERTIFICATE OF ANALYSIS

64 Rock samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1C-OES 50g Fire Assay ICPOES

Code Specific Gravity Core - Core

REPORT **A17-13086**

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Notes:

Values which exceed the upper limit should be assayed for accurate numbers.

CERTIFIED BY:



Elitsa Hrischeva, Ph.D.
Quality Control

ACTIVATION LABORATORIES LTD.
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E-MAIL Ancaster@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

Results

Activation Laboratories Ltd.

Report: A17-13086

Analyte Symbol	Au	Pd	Pt	Spec Grav Core	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo
Unit Symbol	ppb	ppb	ppb	-	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm
Lower Limit	2	5	5	0.01	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1
Method Code	FA-ICP	FA-ICP	FA-ICP	GRAV	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
677101	< 2	112	127	2.97	< 0.3	10.1	< 3	48	< 1	< 2	6.29	< 0.3	73	148	24	6.64	15	< 1	0.29	6.04	31	1040	< 1
677102	25	1360	679	2.95	< 0.3	14.3	< 3	92	< 1	< 2	8.88	< 0.3	25	48	90	3.00	21	2	0.39	2.25	18	474	< 1
677103	102	3560	1410	2.86	0.8	12.9	< 3	51	< 1	< 2	6.65	1.2	74	88	2100	7.37	30	4	0.23	5.34	33	1070	< 1
677104	165	3350	1500	2.91	1.6	10.8	< 3	41	< 1	< 2	7.15	1.0	92	53	4240	7.21	17	3	0.17	4.99	27	966	< 1
677105	70	1380	483	2.94	1.1	9.15	< 3	55	< 1	3	6.42	1.1	99	90	2870	7.40	15	4	0.19	7.02	27	1110	< 1
677106	41	924	313	2.96	0.8	10.4	3	51	< 1	3	5.36	0.4	93	59	1670	7.86	17	6	0.21	6.76	34	1160	< 1
677107	47	1320	380	2.99	0.8	8.80	3	26	< 1	< 2	4.71	0.8	103	306	1910	9.56	16	4	0.10	7.65	36	1390	1
677108	49	1060	296	2.85	0.6	9.61	4	62	< 1	< 2	5.54	0.7	75	207	1560	7.00	18	3	0.25	5.32	31	1060	< 1
677109	75	8090	1820	2.93	1.7	8.02	6	26	< 1	2	4.27	1.5	168	585	3660	10.8	16	4	0.09	6.85	28	1360	< 1
677110	30	546	164	2.81	0.4	6.04	6	< 7	< 1	< 2	3.75	1.3	95	660	1090	10.4	14	9	0.03	9.71	32	1720	< 1
677111	77	966	288	2.89	1.0	4.17	< 3	< 7	< 1	4	4.14	0.5	93	689	2570	8.24	9	< 1	0.05	9.23	24	1450	< 1
677112	114	1600	486	3.01	1.2	4.10	< 3	< 7	< 1	< 2	4.88	0.8	107	962	3240	8.52	9	2	0.03	9.58	22	1550	< 1
677113	60	822	162	2.87	1.0	5.89	< 3	121	< 1	< 2	4.68	0.8	86	383	2100	8.44	14	< 1	0.44	7.28	25	1280	< 1
677114	46	267	79	3.03	0.4	4.35	< 3	< 7	< 1	< 2	5.06	< 0.3	89	508	926	9.01	11	1	0.02	10.0	21	1440	< 1
677115	11	23	10	2.94	< 0.3	7.27	< 3	180	< 1	< 2	6.03	0.3	40	80	569	7.26	21	< 1	0.52	3.92	20	1090	< 1
677116	24	408	148	3.06	0.6	7.50	< 3	170	< 1	< 2	5.67	0.9	69	206	1050	8.23	18	6	0.55	5.33	26	1160	< 1
677117	2	25	14	2.96	< 0.3	6.64	6	29	< 1	2	5.23	0.5	90	89	151	9.28	11	3	0.19	8.98	32	1430	< 1
677118	43	459	201	2.86	0.9	8.01	< 3	49	< 1	< 2	5.20	1.4	96	116	1980	7.87	12	< 1	0.35	7.53	34	1230	< 1
677119	84	1470	553	3.00	1.8	8.14	< 3	45	< 1	< 2	5.30	3.1	111	403	3660	7.91	12	2	0.34	7.65	32	1210	< 1
677120	24	676	254	2.89	0.6	7.07	< 3	41	< 1	< 2	5.15	1.3	67	592	1220	7.30	12	2	0.30	7.79	31	1290	< 1
677121	46	826	281	2.89	0.8	5.60	3	20	< 1	< 2	4.41	0.6	93	581	2080	8.32	11	< 1	0.12	8.45	32	1410	< 1
677122	< 2	14	6	3.01	< 0.3	4.73	< 3	7	< 1	< 2	5.30	< 0.3	81	1240	61	8.83	12	2	0.05	9.87	32	1560	< 1
677123	6	23	9	3.02	< 0.3	6.59	< 3	60	< 1	< 2	2.78	< 0.3	69	177	192	9.56	18	< 1	0.29	8.72	38	1320	< 1
677124	57	355	277	2.65	0.5	7.83	< 3	119	3	< 2	1.20	< 0.3	8	68	41	1.40	14	< 1	0.47	0.46	11	209	1
677125	99	624	477		0.9	2.88	179	82	< 1	< 2	3.10	0.4	184	1820	2840	10.8	8	< 1	0.19	13.4	26	1290	< 1
677126	21	57	19	3.02	< 0.3	6.95	< 3	49	< 1	< 2	2.67	< 0.3	79	171	610	9.54	16	2	0.28	8.63	34	1310	< 1
677127	21	105	44	3.03	0.5	5.12	< 3	8	< 1	< 2	3.98	< 0.3	77	307	659	9.51	12	2	0.05	9.16	21	1450	< 1
677128	36	221	98	2.80	0.5	7.98	5	104	< 1	< 2	3.48	0.6	79	215	1230	8.21	16	4	0.59	6.77	44	1150	< 1
677129	45	241	105	2.88	0.8	5.97	5	73	< 1	< 2	3.06	1.5	79	275	1600	7.72	12	< 1	0.37	7.12	31	1220	< 1
677130	15	95	43	2.89	0.4	9.47	< 3	137	< 1	3	4.05	0.6	114	275	658	7.71	18	6	0.54	6.19	32	1160	< 1
677131	23	123	51	2.90	0.5	5.56	< 3	< 7	< 1	3	3.39	< 0.3	92	194	866	10.2	12	3	0.04	8.76	26	1520	< 1
677132	9	17	7	3.04	0.4	8.34	< 3	494	< 1	< 2	3.12	< 0.3	73	82	485	11.5	22	3	1.35	6.44	47	1400	< 1
677133	10	72	33	3.04	< 0.3	5.14	< 3	< 7	< 1	< 2	4.55	< 0.3	74	82	316	11.4	17	< 1	0.04	9.04	26	1630	< 1
677134	12	70	49	3.03	< 0.3	4.93	3	< 7	< 1	< 2	4.70	< 0.3	81	116	388	11.2	14	5	0.04	9.13	23	1650	< 1
677135	13	72	50	3.06	0.4	6.46	6	30	< 1	< 2	3.62	< 0.3	99	90	624	11.3	16	3	0.15	8.05	32	1570	< 1
677136	23	75	63	2.88	< 0.3	7.79	< 3	81	< 1	< 2	5.22	< 0.3	90	92	611	9.27	16	5	0.50	6.66	29	1430	< 1
677137	4	44	39	2.97	< 0.3	8.77	6	77	< 1	< 2	7.62	< 0.3	60	104	176	8.33	18	2	0.46	4.82	18	1280	< 1
677138	6	44	42	3.02	0.3	8.66	4	75	< 1	< 2	7.53	< 0.3	76	80	413	9.06	19	6	0.53	4.64	21	1310	< 1
677139	11	38	26	2.99	0.3	7.99	< 3	210	< 1	< 2	4.58	< 0.3	69	113	563	10.8	18	3	0.67	5.95	33	1460	< 1
677140	7	15	6	3.04	< 0.3	5.38	4	108	< 1	< 2	2.28	1.1	79	66	219	13.8	20	4	0.41	6.96	32	1830	< 1
677141	7	36	16	3.10	< 0.3	7.95	< 3	175	< 1	< 2	1.90	< 0.3	84	259	278	11.9	21	7	0.39	6.24	39	1450	< 1

Analyte Symbol	Au	Pd	Pt	Spec Grav Core	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo
Unit Symbol	ppb	ppb	ppb	-	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm
Lower Limit	2	5	5	0.01	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1
Method Code	FA-ICP	FA-ICP	FA-ICP	GRAV	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
677142	24	34	13	3.06	0.3	4.96	< 3	16	< 1	< 2	3.97	< 0.3	81	323	614	11.2	13	1	0.04	8.02	27	1670	< 1
677143	7	64	39	3.02	< 0.3	3.38	< 3	< 7	< 1	< 2	5.13	< 0.3	86	403	333	10.2	10	< 1	0.02	9.87	10	1760	< 1
677144	4	76	18	2.92	< 0.3	3.90	< 3	< 7	< 1	4	4.74	< 0.3	78	156	155	10.3	10	1	0.03	9.15	16	1710	< 1
677145	3	22	18	2.98	< 0.3	5.29	4	33	< 1	3	3.90	< 0.3	79	170	128	10.6	13	7	0.12	8.13	34	1750	< 1
677146	8	33	14	2.99	< 0.3	6.28	4	101	< 1	2	3.57	< 0.3	76	170	222	10.1	14	5	0.35	7.81	37	1670	< 1
677147	9	266	158	3.13	< 0.3	5.25	4	226	< 1	< 2	5.12	< 0.3	83	116	354	10.3	15	2	0.69	6.74	32	1740	< 1
677148	68	307	354	2.89	0.7	4.02	5	51	< 1	< 2	5.34	< 0.3	75	276	1050	9.35	11	2	0.16	7.71	21	1700	< 1
677149	< 2	< 5	< 5	2.65	0.5	7.64	3	138	2	< 2	0.96	< 0.3	6	18	22	1.17	11	1	0.47	0.41	9	173	5
677150	99	916	102		< 0.3	8.04	< 3	48	< 1	< 2	6.59	0.8	55	239	477	4.87	12	< 1	0.19	5.41	17	889	< 1
677151	25	22	16	2.93	0.6	5.32	< 3	59	< 1	< 2	4.23	< 0.3	84	226	982	10.3	13	5	0.22	8.01	30	1750	< 1
677152	12	28	17	2.91	< 0.3	4.65	5	126	< 1	< 2	4.71	< 0.3	74	170	447	11.2	15	3	0.53	8.77	31	1970	< 1
677153	17	62	28	3.14	0.3	6.03	< 3	196	< 1	< 2	3.07	< 0.3	92	170	636	11.8	16	2	0.72	7.72	37	1630	< 1
677154	14	157	80	3.11	< 0.3	3.51	< 3	< 7	< 1	< 2	5.59	0.7	91	183	369	10.8	11	1	0.02	9.49	12	1910	< 1
677155	17	113	63	3.06	0.4	4.21	< 3	< 7	< 1	< 2	3.42	< 0.3	103	253	715	11.3	12	3	0.03	9.33	17	2020	< 1
677156	13	27	12	3.01	< 0.3	5.49	< 3	< 7	< 1	< 2	2.85	< 0.3	94	166	496	11.8	17	4	0.02	8.39	21	1590	< 1
677157	7	24	12	3.11	< 0.3	5.91	< 3	190	< 1	< 2	2.58	< 0.3	79	104	247	13.5	18	3	0.68	7.55	35	1780	< 1
677158	3	22	23	3.10	< 0.3	8.01	6	122	< 1	< 2	6.97	< 0.3	50	82	108	8.80	19	2	0.44	3.76	16	1330	< 1
677159	4	16	21	3.01	< 0.3	6.82	< 3	133	< 1	< 2	6.73	< 0.3	49	51	131	8.64	19	1	0.55	3.54	17	1290	< 1
677160	3	31	45	2.96	< 0.3	8.58	4	128	< 1	< 2	6.69	< 0.3	54	55	148	8.04	19	3	0.43	3.75	17	1140	< 1
677161	3	20	18	2.95	< 0.3	8.75	< 3	115	< 1	< 2	6.83	< 0.3	63	173	77	8.40	18	5	0.42	4.39	20	1240	< 1
677162	2	11	21	3.10	< 0.3	9.44	7	107	< 1	< 2	7.00	< 0.3	60	111	63	8.05	18	3	0.38	4.39	20	1190	< 1
677163	2	6	10	2.86	< 0.3	10.8	< 3	185	< 1	< 2	6.92	< 0.3	36	89	46	5.37	19	< 1	0.82	3.12	21	837	< 1
677164	< 2	10	7	2.92	< 0.3	8.83	< 3	123	< 1	< 2	5.94	< 0.3	52	120	57	7.14	17	1	0.73	4.76	28	1110	< 1

Analyte Symbol	Na	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr
Unit Symbol	%	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
677101	1.09	379	0.008	< 3	24	0.01	8	189	< 2	0.08	< 5	< 10	48	< 5	3	107	12
677102	1.93	129	0.010	< 3	< 5	0.01	8	334	< 2	0.11	< 5	< 10	55	< 5	4	49	15
677103	1.02	923	0.007	7	< 5	0.29	6	308	< 2	0.08	< 5	< 10	185	< 5	2	154	8
677104	1.24	1710	0.009	11	< 5	0.69	8	217	< 2	0.11	< 5	< 10	69	< 5	4	146	15
677105	0.99	1450	0.007	6	< 5	0.46	9	160	< 2	0.06	< 5	< 10	45	< 5	3	136	10
677106	1.14	1230	0.006	4	< 5	0.29	6	169	< 2	0.05	< 5	< 10	38	< 5	2	133	8
677107	0.82	1610	0.007	< 3	< 5	0.39	10	112	< 2	0.07	< 5	< 10	61	13	2	161	9
677108	1.56	1230	0.006	< 3	< 5	0.27	10	193	< 2	0.07	< 5	< 10	63	< 5	2	116	8
677109	1.33	2940	0.006	14	< 5	1.42	26	130	6	0.11	< 5	< 10	129	< 5	5	180	10
677110	0.09	996	0.004	7	< 5	0.18	29	7	< 2	0.09	< 5	< 10	123	< 5	3	150	7
677111	0.11	1260	0.004	< 3	< 5	0.45	23	9	< 2	0.09	< 5	< 10	98	< 5	3	95	10
677112	0.08	1710	0.006	< 3	< 5	0.56	32	6	< 2	0.12	< 5	< 10	110	< 5	5	105	14
677113	1.20	942	0.023	4	< 5	0.51	34	93	3	0.28	< 5	< 10	178	< 5	12	99	45
677114	0.06	982	0.004	7	< 5	0.18	27	6	< 2	0.12	< 5	< 10	118	< 5	5	101	16
677115	1.69	77	0.047	3	< 5	0.14	32	230	3	0.19	< 5	< 10	123	< 5	34	86	35
677116	1.60	608	0.041	46	< 5	0.30	30	196	4	0.51	< 5	< 10	216	< 5	22	137	79
677117	0.50	740	0.009	7	< 5	0.04	12	74	< 2	0.09	< 5	< 10	59	< 5	4	141	12
677118	1.10	963	0.010	81	< 5	0.32	13	156	< 2	0.13	< 5	< 10	78	< 5	4	259	14
677119	1.11	1730	0.005	180	< 5	0.69	14	148	< 2	0.06	< 5	< 10	62	5	2	426	6
677120	1.26	769	0.005	30	< 5	0.19	26	103	< 2	0.10	< 5	< 10	95	< 5	4	157	8
677121	0.65	1240	0.004	9	< 5	0.32	22	51	< 2	0.08	< 5	< 10	82	< 5	2	130	6
677122	0.17	1000	0.007	< 3	< 5	0.01	17	12	< 2	0.21	< 5	< 10	108	< 5	6	114	8
677123	0.37	177	0.004	< 3	< 5	0.05	44	49	< 2	0.34	< 5	< 10	281	< 5	7	134	16
677124	4.96	23	0.010	3	< 5	0.01	4	140	< 2	0.07	< 5	< 10	12	< 5	39	19	136
677125	0.07	3590	0.026	7	< 5	1.69	18	26	2	0.30	< 5	< 10	128	< 5	9	86	24
677126	0.36	249	0.005	< 3	< 5	0.10	38	53	< 2	0.16	< 5	< 10	192	< 5	5	144	17
677127	0.14	416	0.005	< 3	< 5	0.12	32	16	< 2	0.11	< 5	< 10	106	< 5	6	134	12
677128	1.05	534	0.007	< 3	< 5	0.47	20	206	< 2	0.09	< 5	< 10	86	< 5	4	129	10
677129	0.55	651	0.004	< 3	< 5	0.36	31	66	< 2	0.12	< 5	< 10	149	< 5	3	156	11
677130	1.50	286	0.016	< 3	< 5	0.52	15	618	6	0.07	< 5	< 10	56	< 5	2	144	7
677131	0.12	382	0.003	< 3	< 5	0.38	32	18	< 2	0.15	< 5	< 10	120	< 5	6	189	30
677132	0.74	139	0.007	< 3	< 5	0.34	33	248	7	0.51	< 5	< 10	332	< 5	3	193	13
677133	0.13	246	0.002	< 3	< 5	0.08	58	11	5	0.23	< 5	< 10	317	< 5	2	180	9
677134	0.12	247	0.003	< 3	< 5	0.11	43	9	9	0.17	< 5	< 10	204	< 5	3	171	11
677135	0.43	274	0.004	< 3	< 5	0.40	36	50	< 2	0.15	< 5	< 10	181	< 5	3	181	11
677136	1.41	260	0.004	< 3	< 5	0.41	32	171	< 2	0.10	< 5	< 10	136	< 5	2	140	8
677137	1.49	162	0.001	< 3	< 5	0.11	38	375	< 2	0.21	< 5	< 10	301	< 5	1	112	< 5
677138	1.64	138	< 0.001	< 3	< 5	0.68	43	333	< 2	0.21	< 5	< 10	327	< 5	1	107	< 5
677139	1.17	144	0.004	< 3	< 5	0.27	33	203	< 2	0.22	< 5	< 10	247	< 5	1	149	6
677140	0.11	82	0.001	11	< 5	0.10	44	7	7	0.64	< 5	< 10	421	< 5	< 1	190	6
677141	0.93	225	0.004	< 3	< 5	0.21	34	115	< 2	0.14	< 5	< 10	205	< 5	1	180	6
677142	0.39	225	0.003	< 3	< 5	0.14	51	43	6	0.27	< 5	< 10	256	< 5	3	147	7

Analyte Symbol	Na	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr
Unit Symbol	%	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
677143	0.10	347	0.004	< 3	< 5	0.13	46	9	< 2	0.13	< 5	< 10	163	< 5	3	112	9
677144	0.10	205	0.004	< 3	< 5	0.03	41	9	< 2	0.14	< 5	< 10	157	< 5	4	130	11
677145	0.26	238	0.009	< 3	< 5	0.02	35	21	6	0.16	< 5	< 10	135	6	6	174	28
677146	0.83	183	0.004	< 3	< 5	0.03	32	67	< 2	0.11	< 5	< 10	115	< 5	3	181	8
677147	0.81	197	0.024	< 3	5	0.25	40	79	< 2	0.41	< 5	< 10	242	< 5	14	155	39
677148	0.61	326	0.017	< 3	< 5	0.21	41	41	< 2	0.26	< 5	< 10	169	< 5	9	157	33
677149	4.98	9	0.013	5	< 5	< 0.01	5	137	< 2	0.16	< 5	< 10	21	< 5	37	18	199
677150	1.35	651	0.003	< 3	< 5	0.12	21	156	< 2	0.07	< 5	< 10	87	< 5	2	45	7
677151	0.69	291	0.005	< 3	< 5	0.26	36	62	< 2	0.14	< 5	< 10	144	< 5	4	183	11
677152	0.16	190	0.005	< 3	< 5	0.09	45	11	6	0.42	< 5	< 10	287	< 5	5	185	10
677153	0.44	251	0.006	< 3	6	0.14	36	47	3	0.30	< 5	< 10	195	< 5	4	202	11
677154	0.12	479	0.007	3	< 5	0.06	41	10	< 2	0.16	< 5	< 10	150	< 5	6	154	15
677155	0.15	332	0.006	4	< 5	0.14	44	13	7	0.15	< 5	< 10	144	< 5	4	179	14
677156	0.08	194	0.006	< 3	< 5	0.10	40	7	7	0.23	< 5	< 10	160	< 5	4	173	23
677157	0.12	153	0.002	3	< 5	0.06	51	14	< 2	0.34	< 5	< 10	302	< 5	3	212	10
677158	1.85	74	0.023	< 3	< 5	0.03	42	218	3	0.30	< 5	< 10	243	< 5	15	76	40
677159	1.84	70	0.028	4	< 5	0.04	34	210	< 2	0.41	< 5	< 10	265	< 5	15	67	51
677160	1.84	98	0.034	< 3	< 5	0.07	28	217	5	0.30	< 5	< 10	178	< 5	14	68	54
677161	1.65	169	0.018	< 3	< 5	0.08	30	203	< 2	0.26	< 5	< 10	173	< 5	9	78	32
677162	1.69	174	0.014	4	< 5	0.05	26	225	< 2	0.21	< 5	< 10	141	< 5	8	65	24
677163	2.10	74	0.017	< 3	< 5	0.01	21	325	2	0.17	< 5	< 10	106	< 5	8	48	31
677164	1.80	121	0.022	< 3	< 5	0.02	26	231	11	0.19	< 5	< 10	124	< 5	9	62	37

Analyte Symbol	Au	Pd	Pt	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na
Unit Symbol	ppb	ppb	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%
Lower Limit	2	5	5	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01
Method Code	FA-ICP	FA-ICP	FA-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
GXR-1 Meas				31.5	2.23	455	671	1	1390	0.89	2.9	9	18	1240	23.7	16	5	0.06	0.21	8	907	16	0.05
GXR-1 Cert				31.0	3.52	427	750	1.22	1380	0.960	3.30	8.20	12.0	1110	23.6	13.8	3.90	0.050	0.217	8.20	852	18.0	0.0520
GXR-1 Meas				31.4	2.03	440	662	1	1390	0.88	3.4	7	20	1250	23.6	11	6	0.05	0.20	8	905	16	0.05
GXR-1 Cert				31.0	3.52	427	750	1.22	1380	0.960	3.30	8.20	12.0	1110	23.6	13.8	3.90	0.050	0.217	8.20	852	18.0	0.0520
GXR-4 Meas				3.5	6.94	104	370	2	11	1.07	< 0.3	16	41	6390	3.01	18	< 1	4.08	1.70	12	151	334	0.54
GXR-4 Cert				4.0	7.20	98.0	1640	1.90	19.0	1.01	0.860	14.6	64.0	6520	3.09	20.0	0.110	4.01	1.66	11.1	155	310	0.564
GXR-4 Meas				3.6	6.73	110	198	2	7	1.08	0.4	16	35	6810	3.10	15	1	3.38	1.70	11	154	323	0.54
GXR-4 Cert				4.0	7.20	98.0	1640	1.90	19.0	1.01	0.860	14.6	64.0	6520	3.09	20.0	0.110	4.01	1.66	11.1	155	310	0.564
SDC-1 Meas					8.50	5	630	3		1.08		19	39	30	4.61	22	< 1	1.18	0.97	33	830		1.57
SDC-1 Cert					8.34	0.220	630	3.00		1.00		18.0	64.00	30.000	4.82	21.00	0.20	2.72	1.02	34	880.00		1.52
SDC-1 Meas					8.27	< 3	630	3		1.09		20	36	30	4.74	20	< 1	2.50	0.98	33	886		1.55
SDC-1 Cert					8.34	0.220	630	3.00		1.00		18.0	64.00	30.000	4.82	21.00	0.20	2.72	1.02	34	880.00		1.52
GXR-6 Meas				0.7	12.9	294	> 1000	1	< 2	0.18	0.3	15	58	76	5.77	27	2	1.96	0.60	34	1080	1	0.10
GXR-6 Cert				1.30	17.7	330	1300	1.40	0.290	0.180	1.00	13.8	96.0	66.0	5.58	35.0	0.0680	1.87	0.609	32.0	1010	2.40	0.104
DNC-1a Meas							96					56	185	101		16				5			
DNC-1a Cert							118					57	270	100		15				5.2			
DNC-1a Meas							95					55	158	99		12				4			
DNC-1a Cert							118					57	270	100		15				5.2			
PK2 Meas	4980	6130	5130																				
PK2 Cert	4790	5918.00	4749.00																				
PK2 Meas	5050	6150	5010																				
PK2 Cert	4790	5918.00	4749.00																				
PK2 Meas	5110	6320	5140																				
PK2 Cert	4790	5918.00	4749.00																				
PK2 Meas	4950	6120	4960																				
PK2 Cert	4790	5918.00	4749.00																				
SBC-1 Meas						27	747	3	< 2		0.4	24	126	33		29				158		1	
SBC-1 Cert						25.7	788.0	3.20	0.70		0.40	22.7	109	31.0000		27.0				163		2	
SBC-1 Meas						33	779	3	< 2		0.5	23	88	32		25				157		2	
SBC-1 Cert						25.7	788.0	3.20	0.70		0.40	22.7	109	31.0000		27.0				163		2	
SdAR-M2 (U.S.G.S.) Meas							969	7	< 2		5.6	15	34	244		19	2			18		12	
SdAR-M2 (U.S.G.S.) Cert							990	6.6	1.05		5.1	12.4	49.6	236.0000		17.6	1.44			18		13	
SdAR-M2 (U.S.G.S.) Meas							> 1000	8	< 2		5.5	16	33	255		16	2			18		11	
SdAR-M2 (U.S.G.S.) Cert							990	6.6	1.05		5.1	12.4	49.6	236.0000		17.6	1.44			18		13	

Analyte Symbol	Au	Pd	Pt	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na
Unit Symbol	ppb	ppb	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%
Lower Limit	2	5	5	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01
Method Code	FA-ICP	FA-ICP	FA-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
677104 Orig				1.6	10.9	< 3	41	< 1	< 2	7.21	0.9	93	46	4320	7.26	17	3	0.18	5.02	27	975	< 1	1.25
677104 Dup				1.5	10.7	5	41	< 1	4	7.09	1.1	92	61	4160	7.17	18	3	0.17	4.97	27	956	< 1	1.23
677111 Orig	78	973	283																				
677111 Dup	75	960	293																				
677118 Orig				0.9	7.93	4	49	< 1	< 2	5.15	1.0	94	115	1950	7.77	12	< 1	0.35	7.45	34	1210	< 1	1.09
677118 Dup				0.8	8.08	< 3	50	< 1	< 2	5.24	1.8	97	117	2020	7.96	12	5	0.35	7.61	34	1240	< 1	1.11
677121 Orig	47	832	281																				
677121 Dup	46	820	280																				
677132 Orig	10	18	8																				
677132 Dup	9	17	7																				
677143 Orig				< 0.3	3.39	< 3	< 7	< 1	< 2	5.12	< 0.3	86	467	334	10.2	10	2	0.02	9.90	11	1770	< 1	0.10
677143 Dup				< 0.3	3.37	< 3	< 7	< 1	< 2	5.14	< 0.3	86	339	331	10.2	10	< 1	0.02	9.84	10	1750	< 1	0.10
677145 Orig	2	22	16																				
677145 Dup	3	23	21																				
677151 Orig	25	22	16	0.6	5.32	< 3	59	< 1	< 2	4.23	< 0.3	84	226	982	10.3	13	5	0.22	8.01	30	1750	< 1	0.69
677151 Split PREP DUP	25	23	16	0.5	5.37	< 3	61	< 1	< 2	4.11	0.3	86	228	956	10.3	13	6	0.24	7.89	31	1730	< 1	0.69
677154 Orig	14	154	79																				
677154 Dup	13	161	82																				
677156 Orig				< 0.3	5.40	< 3	< 7	< 1	< 2	2.82	< 0.3	93	153	486	11.7	17	5	0.02	8.28	21	1570	< 1	0.08
677156 Dup				0.3	5.59	< 3	< 7	< 1	< 2	2.88	< 0.3	94	178	505	12.0	17	3	0.02	8.50	21	1610	< 1	0.08
677164 Orig	< 2	10	7																				
677164 Dup	2	11	7																				
Method Blank				< 0.3	< 0.01	< 3	< 7	< 1	< 2	< 0.01	< 0.3	< 1		2	< 0.01	< 1	< 1	< 0.01	< 0.01	< 1		< 1	< 0.01
Method Blank				< 0.3	< 0.01	< 3	< 7	< 1	< 2	< 0.01	< 0.3	< 1		< 1	< 0.01	< 1	< 1	< 0.01	< 0.01	< 1		< 1	< 0.01
Method Blank				< 0.3	0.03	< 3	< 7	< 1	< 2	< 0.01	< 0.3	< 1		< 1	< 0.01	< 1	< 1	< 0.01	< 0.01	< 1		< 1	< 0.01
Method Blank				< 0.3	< 0.01	< 3	< 7	< 1	< 2	< 0.01	< 0.3	< 1		< 1	< 0.01	< 1	< 1	< 0.01	< 0.01	< 1		< 1	< 0.01
Method Blank				< 0.3	< 0.01	< 3	< 7	< 1	< 2	< 0.01	< 0.3	< 1		< 1	< 0.01	< 1	< 1	< 0.01	< 0.01	< 1		< 1	< 0.01
Method Blank				< 0.3	< 0.01	< 3	< 7	< 1	< 2	< 0.01	< 0.3	< 1		< 1	< 0.01	< 1	< 1	< 0.01	< 0.01	< 1		< 1	< 0.01
Method Blank				< 0.3	< 0.01	< 3	< 7	< 1	< 2	< 0.01	< 0.3	< 1		< 1	< 0.01	< 1	< 1	< 0.01	< 0.01	< 1		< 1	< 0.01
Method Blank				< 0.3	< 0.01	< 3	< 7	< 1	< 2	< 0.01	< 0.3	< 1		< 1	< 0.01	< 1	< 1	< 0.01	< 0.01	< 1		< 1	< 0.01
Method Blank	< 2	< 5	< 5																				
Method Blank	< 2	< 5	< 5																				
Method Blank	< 2	< 5	< 5																				

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
GXR-1 Meas	43	0.060	736	56	0.25	< 4	292	16	0.03	< 5	40	88	171	33	794	27
GXR-1 Cert	41.0	0.0650	730	122	0.257	1.58	275	13.0	0.036	0.390	34.9	80.0	164	32.0	760	38.0
GXR-1 Meas	45	0.058	719	43	0.25	< 4	291	14	0.03	< 5	30	87	161	33	757	26
GXR-1 Cert	41.0	0.0650	730	122	0.257	1.58	275	13.0	0.036	0.390	34.9	80.0	164	32.0	760	38.0
GXR-4 Meas	45	0.129	46	6	1.80	8	213	12	0.29	< 5	< 10	90	39	15	75	54
GXR-4 Cert	42.0	0.120	52.0	4.80	1.77	7.70	221	0.970	0.29	3.20	6.20	87.0	30.8	14.0	73.0	186
GXR-4 Meas	42	0.131	43	< 5	1.83	8	213	6	0.29	< 5	< 10	92	34	15	74	45
GXR-4 Cert	42.0	0.120	52.0	4.80	1.77	7.70	221	0.970	0.29	3.20	6.20	87.0	30.8	14.0	73.0	186
SDC-1 Meas	35	0.050	19	< 5		16	170		0.13	< 5	< 10	42	< 5		104	18
SDC-1 Cert	38.0	0.0690	25.00	0.54		17.00	180.00		0.606	0.70	3.10	102.00	0.80		103.00	290.00
SDC-1 Meas	37	0.053	20	< 5		16	173		0.27	< 5	< 10	60	< 5		102	33
SDC-1 Cert	38.0	0.0690	25.00	0.54		17.00	180.00		0.606	0.70	3.10	102.00	0.80		103.00	290.00
GXR-6 Meas	28	0.036	89	< 5	0.02	28	38	< 2		< 5	< 10	158	< 5	12	134	76
GXR-6 Cert	27.0	0.0350	101	3.60	0.0160	27.6	35.0	0.0180		2.20	1.54	186	1.90	14.0	118	110
DNC-1a Meas	254		< 3	< 5		31	126		0.27			137		17	62	34
DNC-1a Cert	247		6.3	0.96		31	144		0.29			148		18.0	70	38.0
DNC-1a Meas	251		< 3	< 5		31	127		0.28			136		16	60	33
DNC-1a Cert	247		6.3	0.96		31	144		0.29			148		18.0	70	38.0
PK2 Meas																
PK2 Cert																
PK2 Meas																
PK2 Cert																
PK2 Meas																
PK2 Cert																
PK2 Meas																
PK2 Cert																
SBC-1 Meas	89		26	< 5		21	175		0.47	< 5	< 10	218	6	36	194	116
SBC-1 Cert	83		35.0	1.01		20.0	178.0		0.51	0.89	5.76	220.0	1.60	36.5	186	134.0
SBC-1 Meas	88		25	< 5		21	174		0.51	< 5	< 10	215	< 5	34	183	114
SBC-1 Cert	83		35.0	1.01		20.0	178.0		0.51	0.89	5.76	220.0	1.60	36.5	186	134.0
SdAR-M2 (U.S.G.S.) Meas	54		815			4	144				< 10	27	11	30	827	123
SdAR-M2 (U.S.G.S.) Cert	49		808			4.1	144				2.53	25.2	2.8	32.7	760	259
SdAR-M2 (U.S.G.S.) Meas	56		820			4	144				< 10	29	8	30	833	119
SdAR-M2 (U.S.G.S.) Cert	49		808			4.1	144				2.53	25.2	2.8	32.7	760	259
677104 Orig	1730	0.009	16	< 5	0.70	8	219	< 2	0.11	< 5	< 10	69	< 5	4	149	14
677104 Dup	1700	0.009	6	< 5	0.68	8	216	< 2	0.11	< 5	< 10	69	< 5	4	142	15
677111 Orig																
677111 Dup																
677118 Orig	951	0.010	76	< 5	0.32	13	154	< 2	0.13	< 5	< 10	77	< 5	4	255	14

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
677118 Dup	975	0.011	85	< 5	0.33	13	157	< 2	0.13	< 5	< 10	79	< 5	4	262	14
677121 Orig																
677121 Dup																
677132 Orig																
677132 Dup																
677143 Orig	346	0.004	< 3	< 5	0.14	46	9	< 2	0.13	< 5	< 10	163	< 5	3	114	9
677143 Dup	347	0.004	< 3	< 5	0.13	46	9	< 2	0.13	< 5	< 10	163	< 5	3	109	9
677145 Orig																
677145 Dup																
677151 Orig	291	0.005	< 3	< 5	0.26	36	62	< 2	0.14	< 5	< 10	144	< 5	4	183	11
677151 Split PREP DUP	290	0.005	< 3	< 5	0.28	36	63	< 2	0.14	< 5	< 10	145	< 5	4	172	11
677154 Orig																
677154 Dup																
677156 Orig	193	0.006	< 3	< 5	0.10	39	7	11	0.23	< 5	< 10	160	< 5	4	171	23
677156 Dup	196	0.006	< 3	< 5	0.10	40	8	3	0.23	< 5	< 10	160	< 5	4	175	24
677164 Orig																
677164 Dup																
Method Blank	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	< 2	< 0.01	< 5	< 10	< 2	< 5	< 1	< 1	< 5
Method Blank	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	< 2	< 0.01	< 5	< 10	4	< 5	< 1	1	< 5
Method Blank	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	< 2	< 0.01	< 5	< 10	< 2	< 5	< 1	< 1	< 5
Method Blank	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	< 2	< 0.01	< 5	< 10	2	< 5	< 1	< 1	< 5
Method Blank	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	< 2	< 0.01	< 5	< 10	< 2	< 5	< 1	2	< 5
Method Blank	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	< 2	< 0.01	< 5	< 10	< 2	< 5	< 1	< 1	< 5
Method Blank	1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	< 2	< 0.01	< 5	< 10	< 2	< 5	< 1	< 1	< 5
Method Blank	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	< 2	< 0.01	< 5	< 10	< 2	< 5	< 1	< 1	< 5
Method Blank	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	< 2	< 0.01	< 5	< 10	< 2	< 5	< 1	< 1	< 5
Method Blank																
Method Blank																
Method Blank																



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To: P & E MINING CONSULTANTS INC.
201, COUNTY COURT BLV
SUITE 401
BRAMPTON ON L6W 4L2

Page: 1
Total # Pages: 2 (A)
Plus Appendix Pages
Finalized Date: 22-NOV-2017
Account: EJJGPUR

CERTIFICATE RY17239792

Project: East Bull

This report is for 33 Drill Core samples submitted to our lab in Rouyn-Noranda, QC, Canada on 2-NOV-2017.

The following have access to data associated with this certificate:

JARITA BARRY

GENE PURITCH

ANTOINE YASSA

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-22	Sample login - Rcd w/o BarCode
LOG-24	Pulp Login - Rcd w/o Barcode
CRU-31	Fine crushing - 70% <2mm
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
SPL-21	Split sample - riffle splitter
PUL-32	Pulverize 1000g to 85% < 75 um

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Rh-MS25	Rh 30g FA ICP-MS	ICP-MS
ME-ICP61	33 element four acid ICP-AES	ICP-AES
PGM-ICP24	Pt, Pd, Au 50g FA ICP	ICP-AES
PGM-ICP27	Ore grade Pt, Pd and Au by ICP	ICP-AES

To: P & E MINING CONSULTANTS INC.
ATTN: GENE PURITCH
201, COUNTY COURT BLV
SUITE 401
BRAMPTON ON L6W 4L2

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

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

Signature:



Colin Ramshaw, Vancouver Laboratory Manager



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Project: East Bull

CERTIFICATE OF ANALYSIS RY17239792

Sample Description	Method Analyte Units LOR	WEI-21	PGM-ICP24	PGM-ICP24	PGM-ICP24	PGM-ICP27	PGM-ICP27	PGM-ICP27	Rh-MS25	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61
		Recvd Wt. kg	Au ppm	Pt ppm	Pd ppm	Au ppm	Pt ppm	Pd ppm	Rh ppm	Ag ppm	Co ppm	Cu ppm	Ni ppm
H343051		1.11	0.050	1.540	4.53				0.164	<0.5	99	389	542
H343052		1.20	0.112	0.590	1.650				0.061	<0.5	86	1130	1035
H343053		1.29	0.056	0.461	1.400				0.041	<0.5	78	403	570
H343054		0.97	0.003	0.045	0.091				0.005	<0.5	71	53	524
H343055		1.03	0.072	0.452	1.085				0.046	<0.5	70	1170	762
H343056		0.94	0.227	1.665	3.89				0.155	1.1	89	3410	1055
H343057		1.09	0.100	0.772	2.18				0.089	0.8	81	1640	1075
H343058		1.19	0.122	0.772	2.43				0.099	1.0	79	2600	1125
H343059		1.23	0.054	0.421	0.901				0.057	0.8	65	1440	751
H343060		0.97	0.084	1.045	2.54				0.061	0.8	59	1890	715
H343061		1.18	0.024	0.252	0.577				0.033	<0.5	51	330	400
H343062		0.99	0.031	0.296	0.709				0.029	<0.5	73	332	562
H343063		1.05	0.073	0.397	0.835				0.032	0.5	73	1380	802
H343064		1.10	0.013	0.067	0.147				0.002	<0.5	48	268	250
H343065		1.33	0.006	0.107	0.267				0.008	<0.5	62	143	340
H343066		1.06	0.136	1.035	3.32				0.157	0.8	106	2530	1300
H343067		0.99	0.215	0.888	2.11				0.090	0.6	77	1730	863
H343068		1.19	0.046	0.382	0.774				0.038	<0.5	56	546	482
H343069		0.60	<0.001	0.005	0.008				<0.001	<0.5	7	23	9
H343070		0.08	NSS	NSS	NSS				0.038	1.2	198	2890	4130
H343071		0.84	0.088	0.241	0.567				0.026	<0.5	77	745	752
H343072		1.09	0.047	0.272	0.557				0.005	<0.5	66	711	478
H343073		1.16	0.095	0.615	1.070				0.044	0.9	86	1960	934
H343074		0.97	0.188	0.940	2.66				0.101	0.9	90	2540	1280
H343075		1.05	0.370	1.140	2.98				0.171	2.1	87	4980	1370
H343076		1.11	0.124	0.756	1.785				0.073	1.1	91	2940	1240
H343077		0.08	0.087	0.094	0.862				0.003	<0.5	60	570	757
H343078		0.89	0.115	1.700	2.58				0.085	1.2	95	3000	1735
H343079		1.00	0.120	0.720	2.61				0.089	1.1	116	3060	1825
H343080		0.88	0.055	0.347	1.070				0.043	1.2	106	2410	1590
H343081		0.89	0.069	0.505	1.830				0.085	1.2	115	2730	2040
H343082		0.89	0.043	0.293	1.035				0.048	0.8	77	1525	1215
H343083		0.90	0.090	2.11	>10.0	0.11	2.18	10.35	0.169	1.7	192	3610	3780



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Page: Appendix 1
Total # Appendix Pages: 1
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Project: East Bull

CERTIFICATE OF ANALYSIS RY17239792

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: NSS is non-sufficient sample.
ALL METHODS

LABORATORY ADDRESSES

Applies to Method:	Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.		
	ME-ICP61	PGM-ICP24	PGM-ICP27 Rh-MS25
Applies to Method:	Processed at ALS Rouyn-Noranda		
	CRU-31	CRU-QC	LOG-22 LOG-24
	PUL-32	PUL-QC	SPL-21 WEI-21

Appendix 7. Expenditures

Item	Units	Unit Cost	HST	Total
Geologist – R. Sutcliffe, P.Ge				
Field work	29 days	\$650		\$18,850.00
Reporting	4 days	\$650		2,600.00
Contractor Services				
P&E Data Entry, February			110.50	960.50
Clark Exploration, core recovery and cataloguing, travel, materials	2 men for 12 days	\$475/day	2,559.53	22,248.22
A-Star Prospecting, July 13, Channel sampling	2 men for 5 days		1,116.05	9,701.05
P&E Mining, Sept 30, data entry, wireframe modelling			308.10	2,678.10
Edcore Drilling – Nov invoice – 3 holes	320 m		6,243.26	\$54,268.30
Edcore Drilling – mobilization advance				8,500.00
Devishot – down hole survey tool rental			241.45	2,098.75
P&E Oct Invoice – site visit			188.83	1,641.33
P&E Nov Invoice – site visit and analyses			299.29	3,960.98
A-Star Prospecting, October 2017, Channel sampling, 2 men for 3 days plus equip			670.80	5,830.80
Colin Bowdidge, Differential GPS Survey, 4 days at \$750 plus mileage				3,530.00
Clark Exploration – Core management, core cutting, sampling, 21 days at \$475 plus mileage and equip, saw rental			1,769.73	15,383.03
Analytical				
ActLabs, August 2, assays	44 samples	31.50/sample	230.82	2,006.32
ActLabs, Sept 22, assays	20 samples	41.00/sample	105.37	915.87
Actlabs, Dec 8 to 13, assays	288 samples	31.50/sample	1385.74	12,045.78
OGS Labs, LDI-1 Reference Material			32.50	282.50
CDN Resource Labs, ME-1310 Cert Ref			25.75	223.85
Travel				
Sutcliffe – personal vehicle, 9 trips, May 4/5, 9/10, June 8, June 28, July 9/11, August 16/18, Oct 23/28, Oct 30/Nov 4, Nov 4/10	10,702 km	\$0.50/km		5,351.00
Food and Accommodation				

Pinewood Motor Inn, Espanola, May 4			4.65	105.08
East Bull Lodge – accommodation Oct 23 to 29	17 man nights		99.45	864.45
East Bull Lodge – accommodation for drill program Oct 30 to Nov 11	21 person nights		122.85	1,067.85
East Bull Lodge – ATV rental	2 days		19.50	169.50
Meals - May 4&5, July 10, Aug 17, Nov 4 & 10			7.29	80.40
Stewart’s General Store, Webbwood, Nov 7				34.27
Office Supplies & Field consumables				
Copies – Staples, May, June, Aug, Oct/Nov 2017			17.44	151.59
Spray Paint for channels – Can Tire, June			0.78	6.77
In-Reach satellite text communication system, safety plan – April to Nov 2017			30.74	258.69
Cheque for courier charges				60.00
Lowes - Batteries, nails for channel tags			3.05	26.53
Core storage				
June 2017 thru Dec 2017			117.00	1,017.00
TOTAL EXPENDITURES			\$15,710.47	\$176,918.51

404000

405000

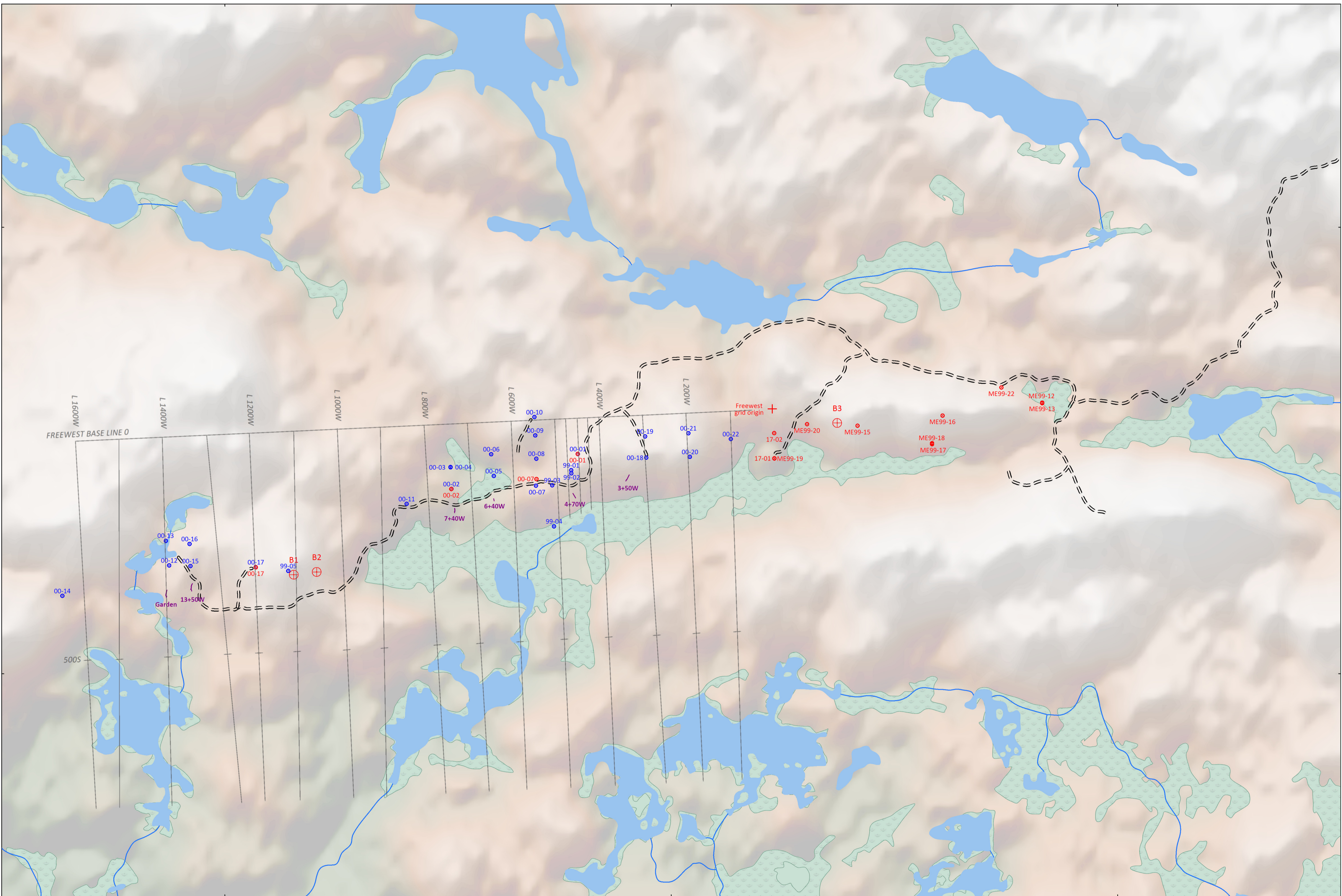
406000

5142000

5142000

5141000

5141000



FREEWEST BASE LINE 0

Freewest grid origin

Garden

PAVEY ARK MINERALS INC.
EAST BULL PGM PROPERTY
TOPOGRAPHY & DRILL HOLES
DIFFERENTIAL GPS SURVEY

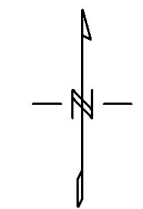
LEGEND

- 00-18 ● Diamond drill hole from Freewest transit survey rotated 2475° CCW
- ME99-15 ● Diamond drill hole located by DGPS
- 3+50W / Channel samples surveyed by DGPS
- B3 ⊕ DGPS base station (marked with cross)

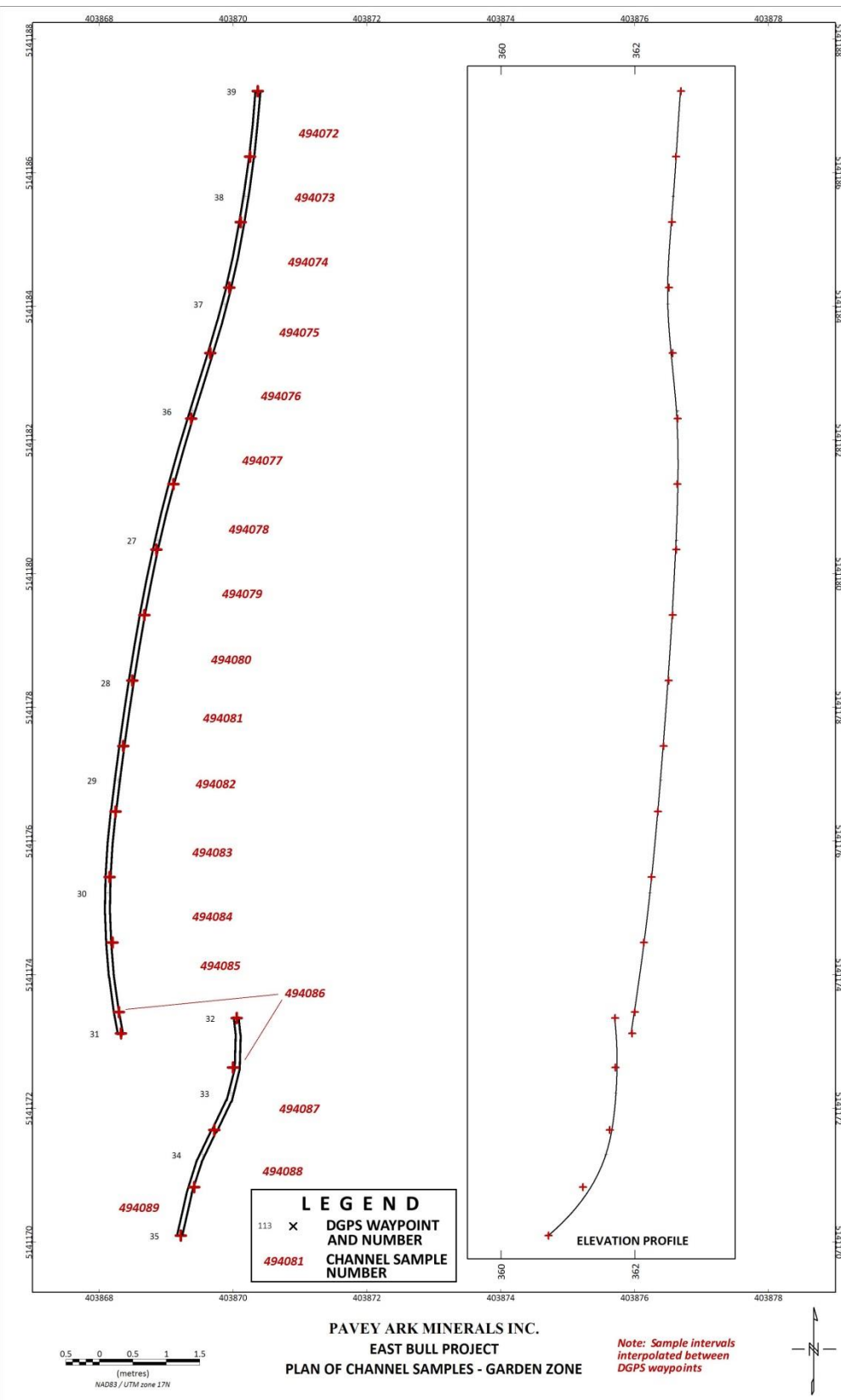
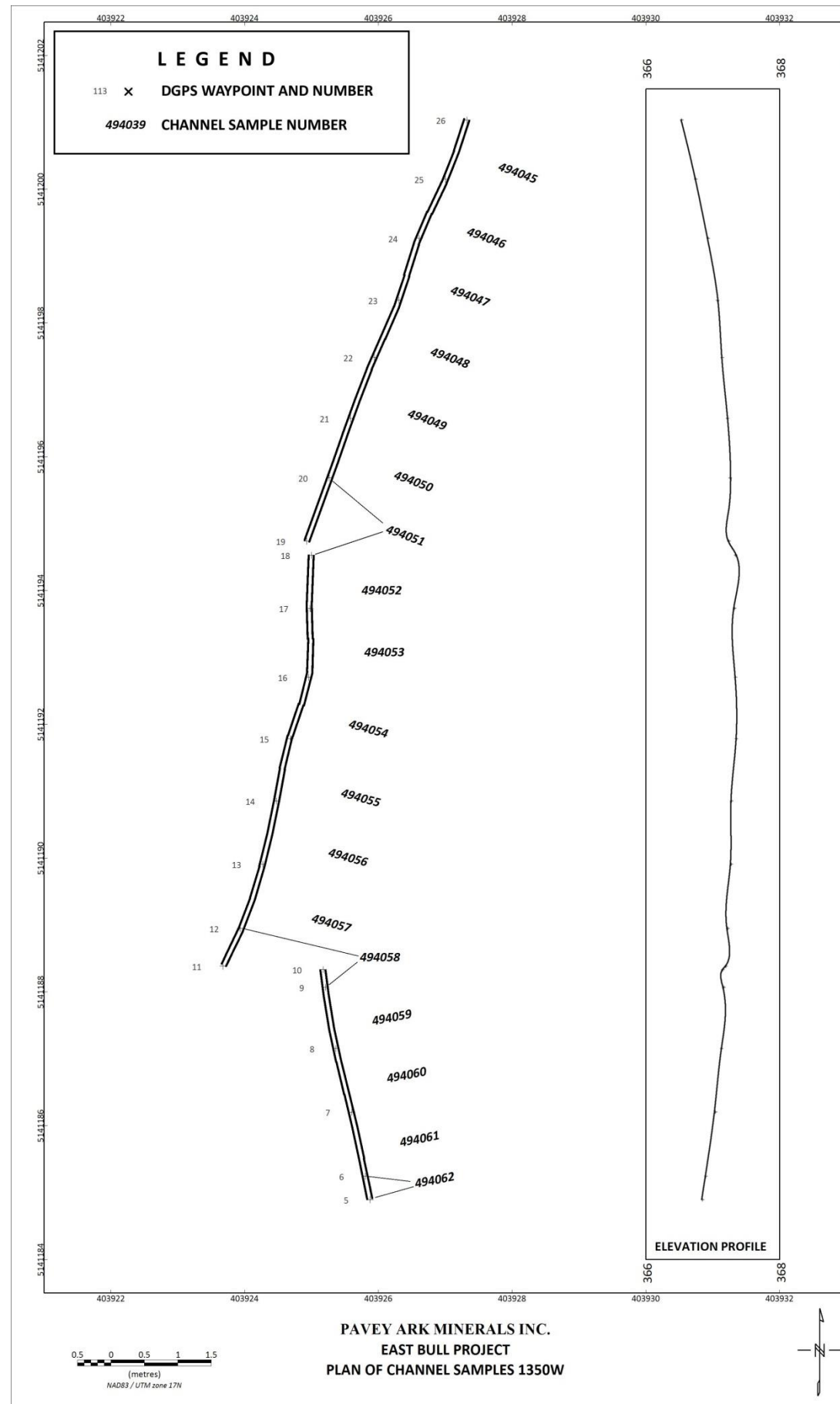
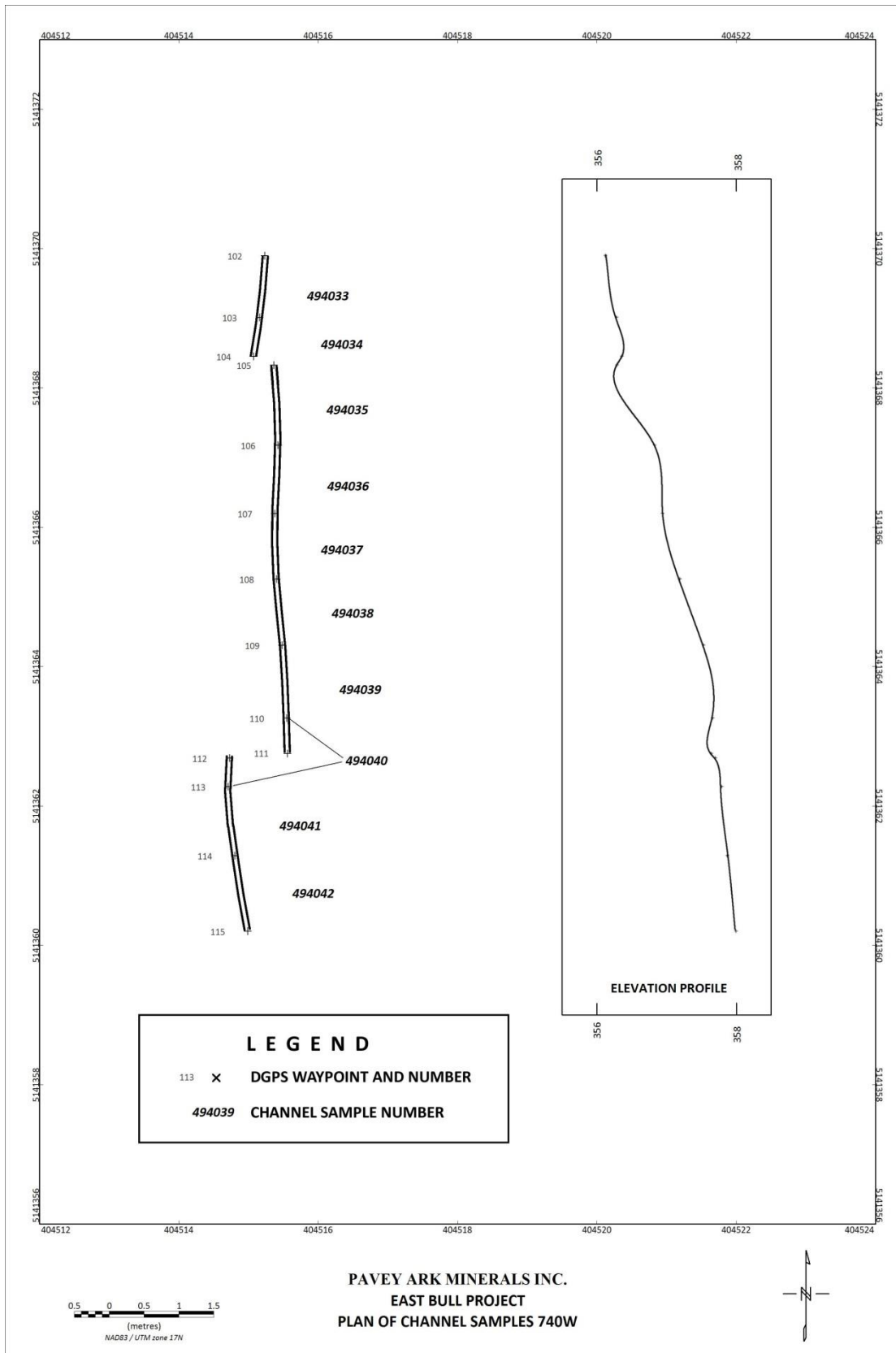
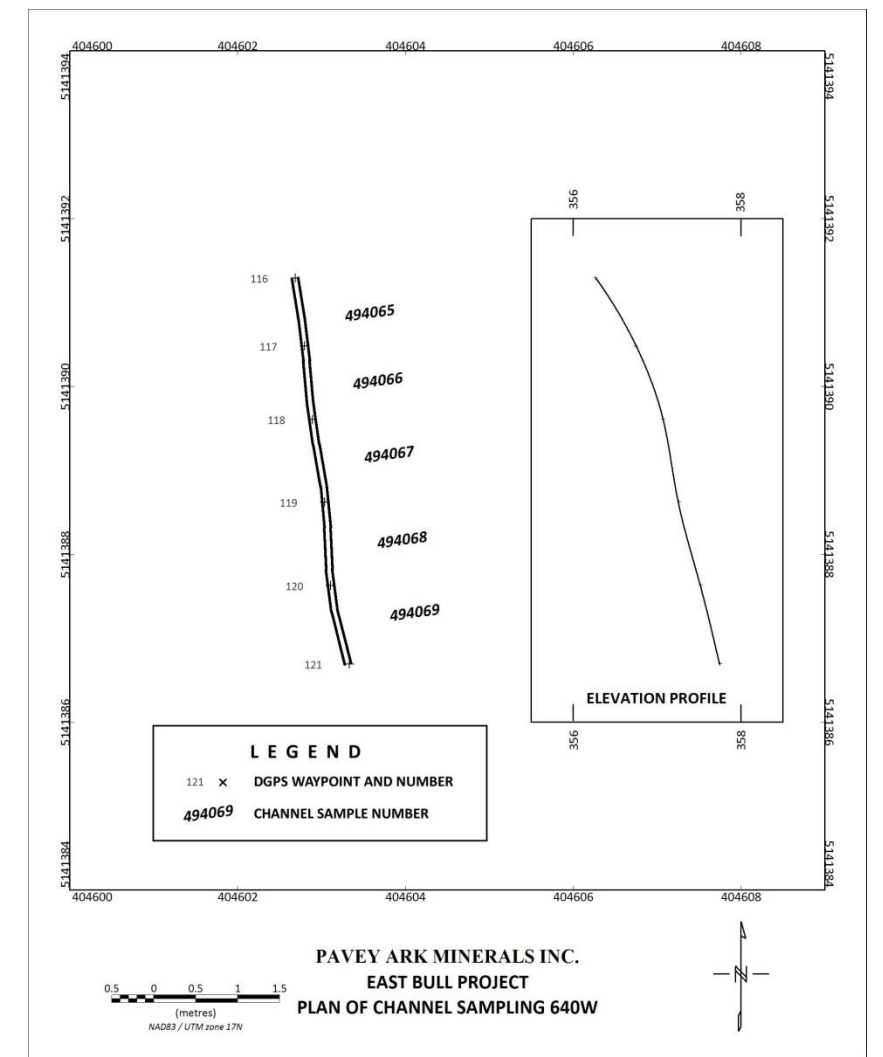
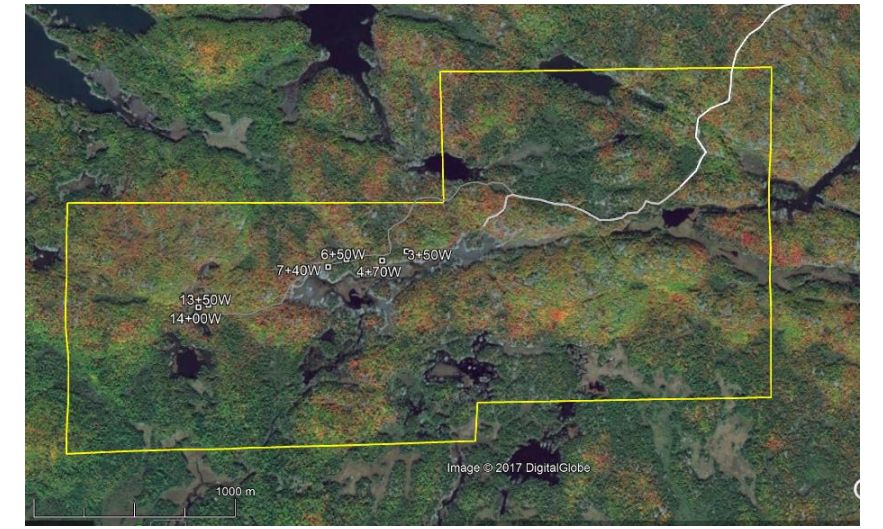
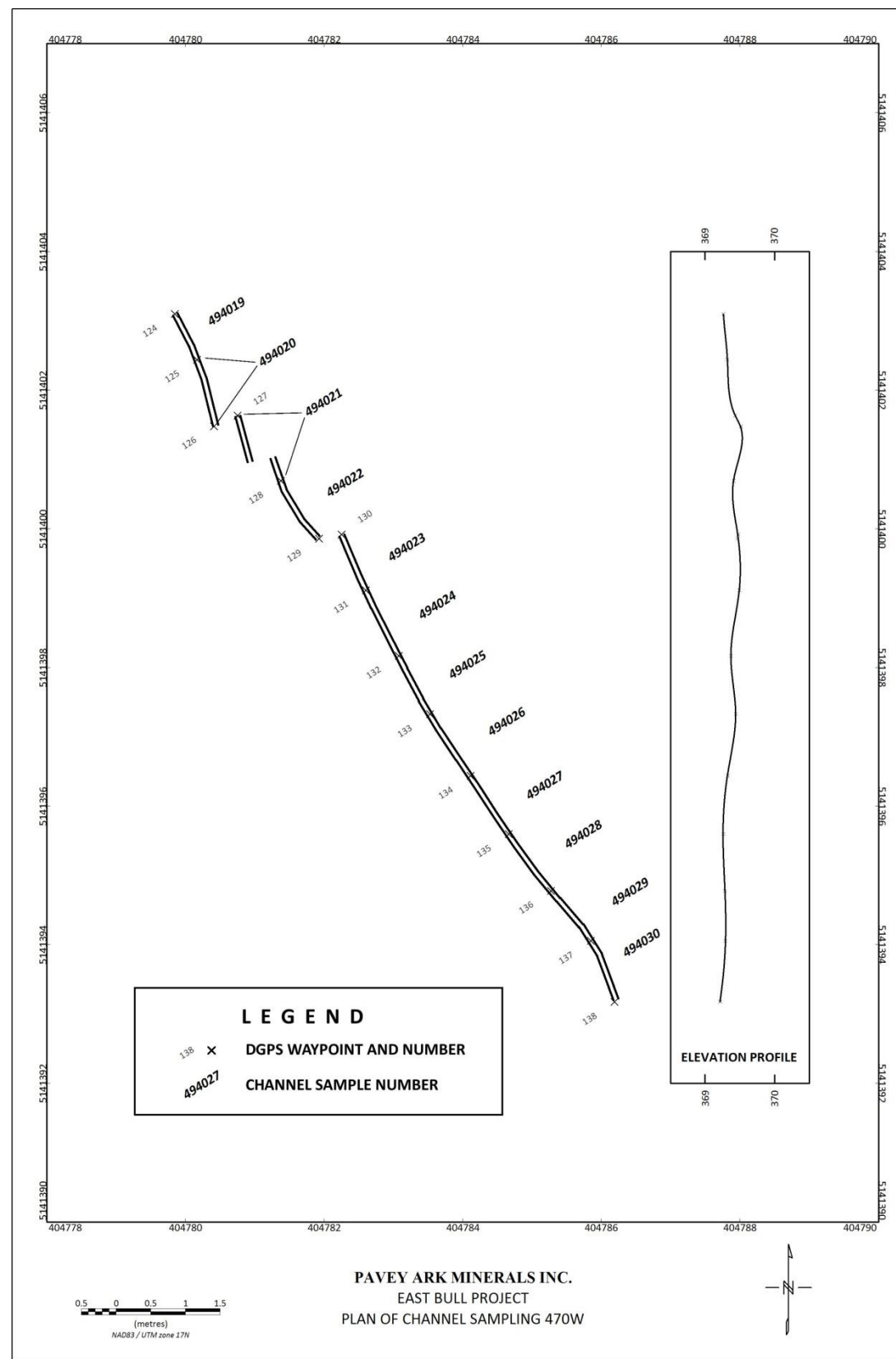
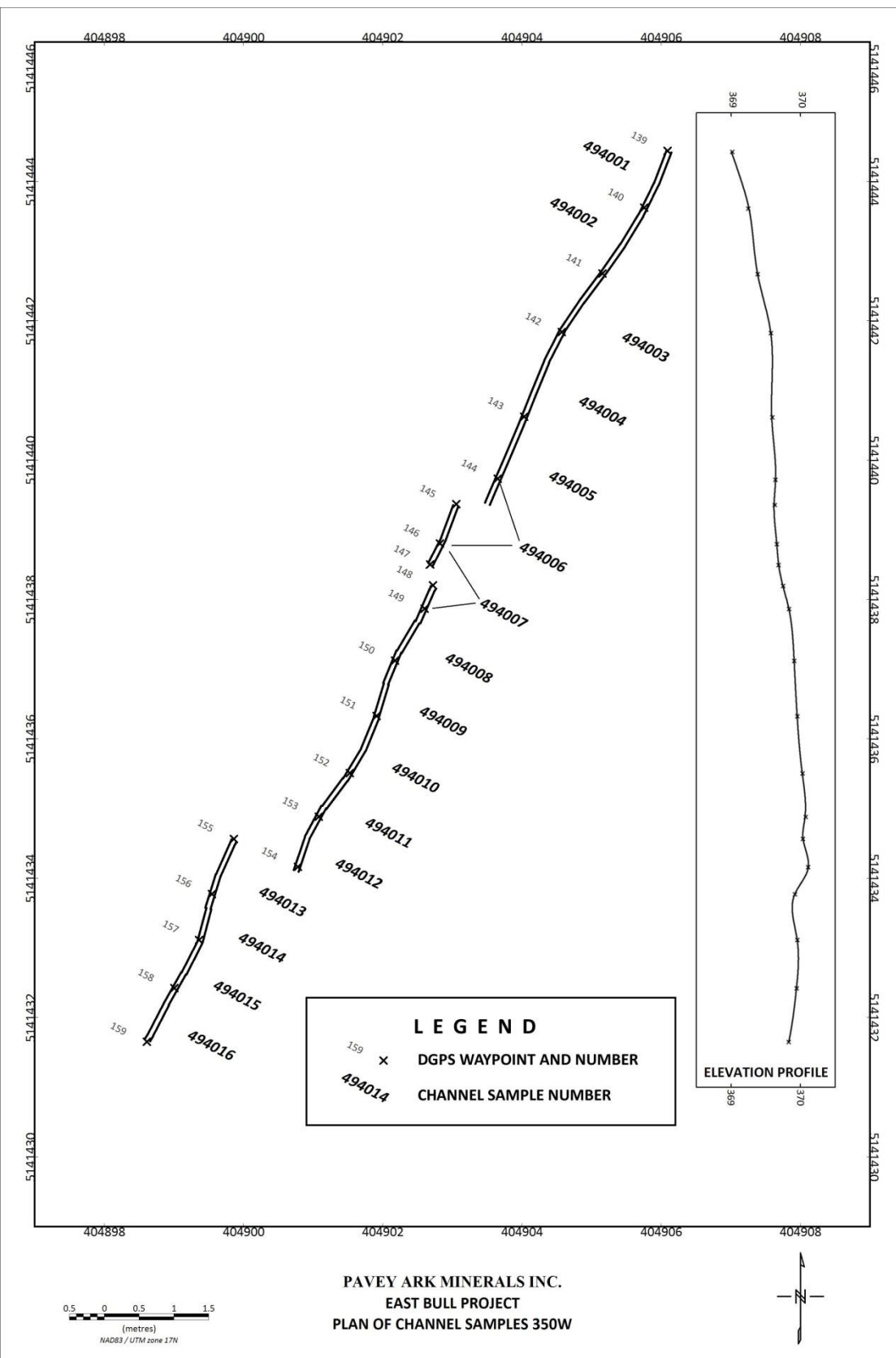
Location of the Freewest grid is approximate



(metres)
 NAD83 / UTM zone 17N
 Bowdidge 2017

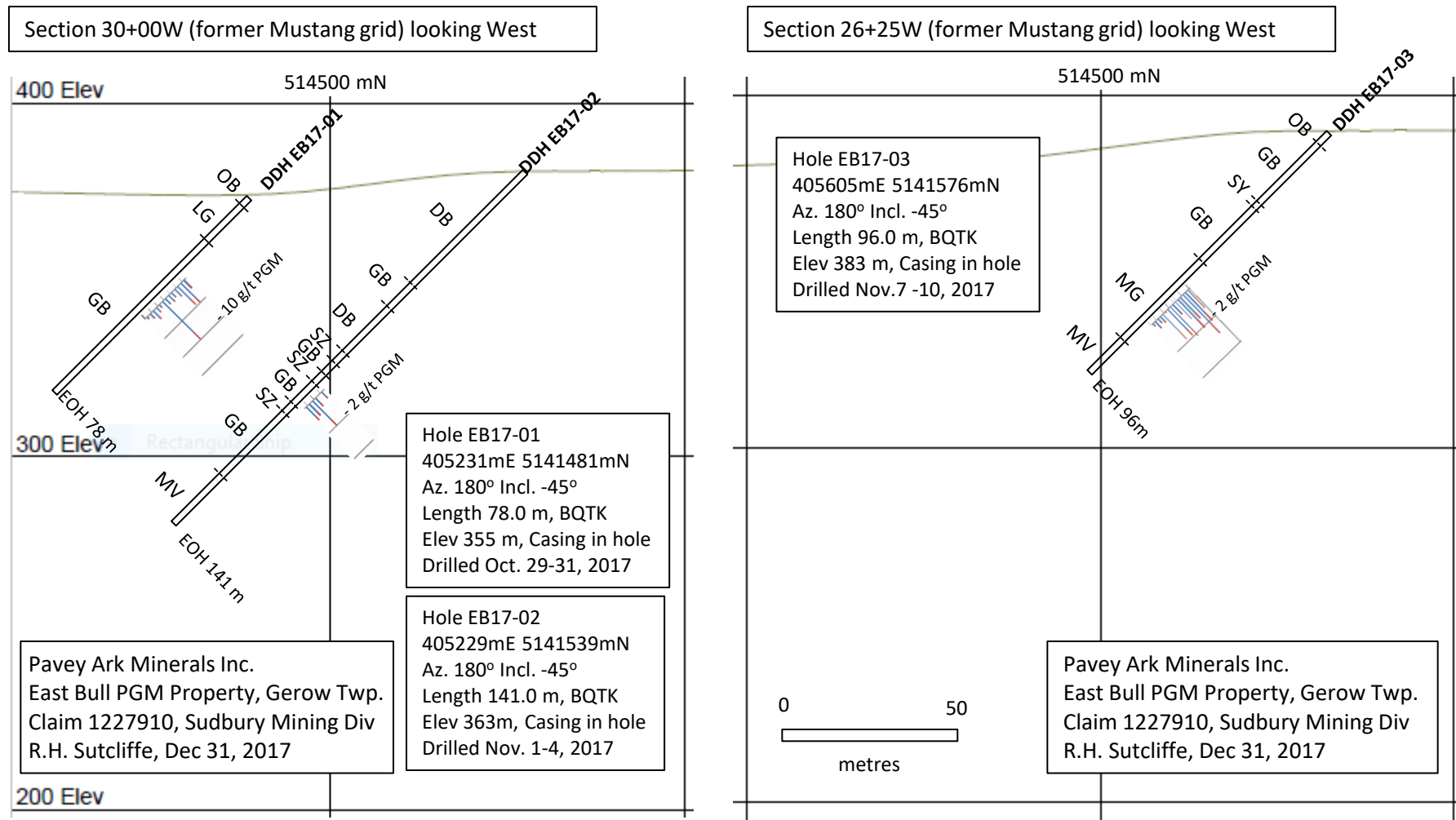


Pavey Ark Minerals Inc. – East Bull PGM Project - 2017 Channel Sample Plans



Map. 3.
To accompany assessment report, Dec 31, 2017
Scale 1:100 R.H. Sutcliffe

Pavey Ark Minerals Inc. – East Bull PGM Project - 2017 Drill Plan and Sections



Map. 4. To accompany assessment report, R.H. Sutcliffe, Dec 31, 2017,