Teller (A-2 and A-1) Quadrangle, Alaska USA

TECHNICAL REPORT, MAIDEN INFERRED RESOURCE ESTIMATE OF THE GRAPHITE CREEK PROPERTY, ALASKA, USA

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Contents

1 Summary 1
2 Introduction 12
3 Reliance on Other Experts 16
4 Property Description and Location 17
5 Accessibility, Climate, Local Resources, Infrastructure and Physiography 22
5.1 Access, Local Resources, and Infrastructure 22
5.2 Climate and Physiography 23
5.3 Pilgrim Hot Springs 24
6 History 24
6.1 Discovery and Initial Documentation 24
6.2 Documentation of Historical Graphite Showings 26
6.2.1 Christophosen Creek 26
6.2.2 Hot Springs Creek 27
6.2.3 Trail Creek 27
6.2.4 Glacier Canyon Creek 28
6.2.5 Ruby Creek 30
6.2.6 Graphite Creek 31
7 Geological Setting and Mineralization 31
7.1 Regional Geology 31
7.2 Property Geology 34
7.2.1 Property Geology: Observations during a 2012 Site Visit 35
7.2.2 Property Geology: Observations during 2012 Fieldwork 35
7.3 Mineralization 37
7.4 Graphite Flake Characteristics 37
8 Deposit Types 38
9 Exploration 39
9.1 Geological Mapping 39
9.1.1 2011 Field Observations 39
9.1.2 2012 Geological Mapping 40
9.2 Surficial Whole Rock Geochemical Surveys 43
9.2.1 2011 Rock Grab Samples 43
9.2.2 2012 Rock Grab and Channel Sample Program 46
9.2.3 2012 Bulk Pit Sample Program 49
9.3 2012 SkyTEM Geophysical Survey 49
9.3.1 SkyTEM System Overview and Survey Details 49
9.3.2 SkyTEM Survey Results 51
10 Drilling 54
11 Sample Preparation, Analyses and Security 58
11.1 Rock Sample Collection 58
11.2 Drill Core Collection 59
11.3 Activation Laboratories Ltd. On-Site Sample Prep Lab 59
11.4 Sample Shipment, Chain of Custody and Analysis 60
12 Data Verification 62
12.1 Data Verification 62
12.2 Quality Control Procedures 63

12.2.1 Sample Stream Assay Checks ... 63
12.2.2 Quality Control Results ... 63
12.3 Data Verification and Quality Control Conclusion ... 66
13 Mineral Processing and Metallurgical Testing ... 66
13.1 Physical Graphite Flake Properties ... 66
13.1.1 2011 Flake Size Distribution and Petrographic Examination ... 66
13.1.2 2012 Flake Size Distribution and X-Ray Diffraction Analysis ... 67
13.2 Preliminary Graphite Separation Tests ... 71
14 Mineral Resource Estimate ... 71
14.1 Site visit ... 72
14.2 Data Summary ... 74
14.3 Additional Assessment of the Data ... 76
14.3.1 Additional QAQC ... 76
14.3.2 Additional In situ sampling ... 82
14.4 Mineralized zones ... 83
14.5 Composites ... 87
14.6 Analysis of the Graphitic Carbon Grades and Distribution ... 87
14.7 Resource Estimation ... 97
15 Adjacent Properties ... 102
16 Other Relevant Data and Information ... 102
16.1 Potential for a Southwestern Extension of Graphite Mineralization at the Graphite Creek Property ... 102
16.2 Traditional uses for Graphite ... 103
16.3 Demand for Graphite in Battery Production ... 104
16.4 Other Uses for Graphite ... 104
17 Interpretation and Conclusions ... 105
18 Recommendations ... 111
19 References ... 113
20 Certificates of Authors ... 117
Appendix 1. 2011 and 2012 Expenses ... 120
Appendix 2. Rock Sample Laboratory Certificates ... 121
Appendix 3. 2012 Exploration Program; Rock Grab and Channel Samples ... 122
Appendix 4. 2012 Exploration Program; Drillhole Cross Sections ... 134

Tables

Table 1. Graphite Creek Maiden Inferred Resource estimate reported at cut-offs of 2.0%, 3.0%, 5.0%, 7.0% and 10.0% graphitic carbon.. ... 6
Table 2. Potential in situ graphite of the Graphite Creek Property based on a southwestern extension of the Maiden Inferred Graphite Creek Resource estimate. ... 7
Table 3. Recommended 2013 exploration program budget at the Graphite Creek Property. ... 11
Table 4. Graphite Creek Property Alaska State Mining Claims. All claims are a full quarter section (160 acres). ... 18
Table 5. Graphite Creek Property Federal Mining Claims. ... 21
Table 6. Analytical results from R. Eccles May 2012 field visit to the property. ... 36

Table 7. Sample results from Alder and Bundtzen (2011)... 44
Table 8. 2011 sample results from collected by Graphite One Resources Inc. (from Hudson, 2011).. 44
Table 9. Summary of 2012 mini-pit samples. 50
Table 10. SkyTEM survey details. 51
Table 11. Summary of drillhole specifications. 55
Table 12. Selected assay intervals from drill core that was analyzed in the Maiden Inferred Resource Estimate area. 57
Table 13. Graphite fraction sizes from high-grade, disseminated, and mixed high-grade and disseminated samples collected from the Graphite Creek Property during 2011 (Hudson, 2011).. 68
Table 14. Graphite fraction sizes from drill core material collected during the 2012 drill program. 70
Table 15: Summary of duplicate results for additional QA/QC. 76
Table 16: Additional in situ sample results. 82
Table 17: Summary statistics of 2 m composites within the LODE 1 domain. 89
Table 18: Summary statistics of the 2 m composites within the LODE 2 domain. 91
Table 19: Summary Statistics of the 2 m composites within the LODE 3 domain. 93
Table 20: Summary Statistics of the 2 m composites within the LODE 4 domain. 95
Table 21: Summary Statistics of the 2 m composites within the LODE 5 domain. 97
Table 22: Graphite Creek Maiden Inferred Resource estimate reported at cut-offs of 2.0%, 3.0%, 5.0%, 7.0% and 10.0% graphitic carbon.. 98
Table 23: Block model origin and extent in meters. 99
Table 24. Potential in situ graphite of the Graphite Creek Property based on a southwestern extension of the Maiden Inferred Graphite Creek Resource estimate. 103
Table 25. Graphite Creek Maiden Inferred Resource estimate reported at cut-offs of 2.0%, 3.0%, 5.0%, 7.0% and 10.0% graphitic carbon.. 110
Table 26. Recommended 2013 exploration program budget at the Graphite Creek Property. 112

Figures

Figure 1. General location of Graphite One Resources Inc. Property in Alaska. 14
Figure 2. Graphite One Resource Inc. land holdings on the west side of the Kigluaik Mountains. 15
Figure 3. Historical workings and occurrences in the Graphite One Resource Inc. Graphite Creek Property.. 25
Figure 4. Geological sketch of Christophosen graphite showing (Alder and Bundtzen, 2011). 27
Figure 5. Measured section at Hot Springs Creek (Nelson, 2011). 28
Figure 6. Measured section at Glacier Canyon Creek (Nelson, 2011). 29
Figure 7. Geologic sketch of prospect adit on Ruby Creek graphite showing (Alder and Bundtzen, 2011). 30
Figure 8. Regional geology of Graphite One Resources Inc. Graphite Creek Property. 32
Figure 9. Historical detailed geology of Graphite One Resources Inc. Graphite Creek Property. 33

Figure 10. Geological map of the Graphite Creek Maiden Inferred Resource Estimate area. 41
Figure 11. Location of Hudson (2011) and Eccles (2012) rock samples taken at the Graphite Creek Property.. 45
Figure 12. Location of 2011 and 2012 grab, channel and bulk pit rock samples. 47
Figure 13. Selected 2011 and 2012 sample locations with exposed surface samples comprising >10% graphitic carbon. 48
Figure 14. SkyTEM helicopter-borne time-domain electromagnetic image; High Moment Z-coil Channel 05.. 52
Figure 15. SkyTEM helicopter-borne corrected residual magnetic intensity (RMI) image. 53
Figure 16. Location of the 18 drillholes drilled during the 2012 exploration program, 17 of which are used in the Maiden Inferred Resource Estimate for this Technical Report.. 56
Figure 17. Time series charts for Graphite One standard blanks, laboratory standard method blanks and laboratory standards.. 64
Figure 18. X-Y scatter plots for Graphite One and laboratory sample duplicates. 65
Figure 19. Cumulative size distribution of graphite flakes from sample 12GPHFL004 (drillhole 12GCH005, 6.13-25.00 m). 69
Figure 20. Photographs of the warehouse facility (core storage and prep lab). 72
Figure 21. Photographs of the Property during the site visit. 73
Figure 22. Plan view of drillholes for resource area. 74
Figure 23: Plan views of the drillholes in GENESIS. 75
Figure 24: Histogram of % difference – check value versus the original. 77
Figure 25: Original versus check sample assays - % graphitic carbon. 77
Figure 26: Comparison of labs - % graphite versus sample sequence. 78
Figure 27: Check samples: % total carbon versus % graphitic carbon. 79
Figure 28: Check samples: % total carbon versus % organic carbon. 80
Figure 29: Check samples: % organic carbon versus % graphitic carbon. 81
Figure 30. Plan view with trace of cross sections and solids (lodes) in GENESIS. 83
Figure 31: Typical cross sections with % graphitic carbon color coded with zones (lodes). 83
Figure 32: Plan view of mineralized solids (lodes). 85
Figure 33: Typical plan view of mineralized solids (lodes) at 200 mZ and 100 mZ elevation. 86
Figure 34: Histogram of the % graphite for the 2 m composites within the Lode 1 domain. 87
Figure 35: Log Histogram of the % graphite for the 2 m composites within the Lode 1 domain. 88
Figure 36: Cumulative frequency diagram of the % graphite for the 2 m composites within the Lode 1 domain. 88
Figure 37: Histogram of the % graphite for the 2 m composites within the Lode 2 domain. 89
Figure 38: Log histogram of the % graphite for the 2 m composites within the Lode 2 domain. 90

Figure 39: Cumulative frequency diagram of the % graphite for the 2 m composites within the Lode 2 domain. 90
Figure 40: Histogram of the % graphite for the 2 m composites within the Lode 3 domain. 91
Figure 41: Log histogram of the % graphite for the 2 m composites within the Lode 3 domain. 92
Figure 42: Cumulative frequency diagram of the % graphite for the 2 m composites within the Lode 3 domain. 92
Figure 43: Histogram of the % graphite for the 2 m composites within the Lode 4 domain. 93
Figure 44: Log Histogram of the % graphite for the 2 m composites within the Lode 4 domain. 94
Figure 45: Cumulative frequency diagram of the % Graphite for the 2 m composites within the Lode 4 domain. 94
Figure 46: Histogram of the % graphite for the 2 m composites within the Lode 5 domain. 95
Figure 47: Log histogram of % graphite for the 2 m composites within the Lode 5 domain. 96
Figure 48: Cumulative frequency diagram of the % graphite for the 2 m composites within the Lode 5 domain. 96
Figure 49: Search Ellipsoids used in the resource estimation. 99
Figure 50: Plan view of the block model at 200 & 250 mZ close-up. 100
Figure 51: Typical cross section of the block model looking West at 474335N. 101
Figure 52: Long section of the block model looking south. 101

1 Summary

During 2012, Graphite One Resources Inc. ("Graphite One") engaged SGS Canada Inc. – Geostat Group ("SGS") and APEX Geoscience Ltd. ("APEX") to prepare a maiden inferred resource Technical Report (the "Technical Report") on their Alaskan Graphite Creek Property (the "Property"). The "Graphite Creek Maiden Inferred Resource" Technical Report is written to comply with standards set out in National Instrument (NI) 43–101, Companion Policy 43–101CP and Form 43–101F1 for the Canadian Securities Administration ("CSA"). Leading up to the Technical Report, APEX, on behalf of Graphite One, compiled historical data and information, performed a due diligence site visit, and coordinated a 2012 exploration program that included: a dual-moment Time-Domain Electromagnetic (TDEM) survey; geological mapping; grab, channel and bulk rock sampling; and an 18 hole (4,248 m) drill program.

Graphite One's Property is located on the Seward Peninsula of Alaska, USA (Teller A-2 and A-1 Quadrangles), about 59 km north of Nome, Alaska, and offers significant potential for discovery and development of a near-surface/exposed, large-flake, high-grade graphite deposit. The Property is located on the north flank of the Kigluaik Mountains and is approximately 20 km from seasonal roads, 3 km inland from intertidal waters at Windy Cove (Imuruk Basin) and 3 km away from an airstrip.

The Graphite Creek Property land package comprises 129 claims totaling 16,801 acres (6,799 hectares), essentially controlling all prospective lands of known graphite mineralization in the region. The deals to secure the Property were five-phase. During January 2012, Graphite One entered an option agreement to earn 100% interest in claims encompassing known graphite showings over a three year period through exploration work totaling approximately $1.525 million, which Graphite One has completed with its 2012 summer exploration program. During February 2012, Graphite One staked an additional 20 contiguous claims, for which they own 100% mineral rights. Also during February 2012, Graphite One acquired a 100% interest in 28 additional claims from a private individual for CDN$20,000 along with a 2% production royalty which can be purchased in the first three years for a payment of CDN$1,000,000. In June 2012, Graphite One acquired an additional 17 claims, for which they own 100% mineral rights. Lastly, during September 2012, Graphite One staked an additional 40 claims, for which they own 100% mineral rights.

The Graphite Creek Property is historically characterized by a series of, high-grade graphite deposits or showings that crop out in incised creek valleys on the northern, lowermost slopes of the Kigluaik Mountains. The graphite showings were first discovered after the 1898 Cape Nome gold rush, and have been reported under the guise of several names including the Uncle Sam, Tweet and Kigluaik graphite deposits. The showings were intermittently mined from 1907 to 1920 with some 580 tonnes of hand-sorted graphite mined from talus and adits (small <10 m excavations into exposed outcrop) that penetrated high-grade graphitic zones. Prior to Graphite One's interest, the deposits were last explored during the mid-1990s when minor mineralogical (x-ray diffraction) and chemical work was conducted. To the best of the author's knowledge,

the graphite showings were never drill-tested prior to Graphite One's 2012 exploration program.

The graphite deposits consist mainly of segregations (lenses and streaks) of semi-massive to massive graphite and graphite disseminations that are hosted in schistose rocks within the lower granulite facies portion of the Kigluaik Group. Based on surface exposures and workings, the deposits are known to strike in a northeasterly direction adjacent to the high angle, strike-slip Kigluaik Fault. Graphite zones within the schistose rocks occur as: 1) massive resistant graphite segregations in sillimanite-garnet-biotite-quartz schist; 2) flaky graphitic sillimanite-garnet-biotite-quartz schist consisting of 15-55% graphite; and 3) graphitic biotite-quartz schist containing 1-10% disseminated graphite. Historical sampling suggests that the sillimanite-garnet-biotite-quartz schist has massive 'high-grade' graphite segregations (and disseminated graphite) that can yield up to 60% graphite, and the biotite-quartz schist contains 2% to 6% disseminated graphite.

During 2011 and 2012, Graphite One conducted exploration work at the Graphite Creek Property. The majority of the exploration work was completed during the summer 2012 including: a time-domain helicopter-borne electromagnetic survey; geological mapping; surface grab, channel and bulk pit sampling; and an 18 drillhole program to test the graphitic units at depth. Total 2011 and 2012 expenditures exceed CDN$4,800,000. The 2011 and 2012 exploration programs, and 2012 due diligence field visits to the Property by the authors, confirmed the existence of massive segregation-, large flake- and disseminated-graphitic schistose rock units at the Graphite Creek Property.

SkyTEM Canada Inc. ("SkyTEM") was contracted to fly a time-domain, helicopter-borne electromagnetic survey over the Graphite One Property. A total of 1,523.5 line-kilometres were flown in two phases. The first phase collected survey data during May 2012 and the second phase collected survey data over newly acquired claims during July and August 2012. The two survey phases were collected over adjoining blocks using SkyTEM systems with identical system calibrations.

Bands of continuous high-electromagnetic anomalies mimic historical and 2012 geological mapping of high-grade graphitic sillimanite-garnet-biotite-quartz schist in the Graphite Creek Property area. The high-electromagnetic bands also correlate well with high-carbon geochemical samples collected in 2011 and 2012. Subsequently, interpretation of the electromagnetic data provides preliminary evidence that the high-grade graphite layers observed in incised creek exposures are continuous along strike in a north-easterly direction for approximately 18 km.

New 2012 geological mapping confirms historical observations of distinct geological layers comprising high-grade massive segregated and disseminated large-flake graphite in sillimanite-garnet-biotite-quartz schist and disseminated graphite in biotite-quartz schist (±garnet). Based on strike/dip measurements, the layers consistently dip northwards such that these layers appear to represent continuous geological units and are not overly distorted by complex regional or large-scale fold belts. Small localized folding does exist on the <1 m scale, but it is more or less confined within the high-grade graphite schist layers.

A total of 591 rock grab samples were sampled throughout the Graphite Creek Property during 2012 fieldwork. Rock sample types include graphitic sillimanite-garnet-biotite-quartz and biotite-quartz (±garnet) schistose units plus localized intrusive diorite. All samples were analyzed for specific gravity and graphitic carbon (Cg). Of the 591 samples, 11 samples yielded >45% Cg (up to 80.9% Cg), 47 samples had >10% Cg and 137 samples had >3% Cg. In addition to the rock grab samples, 32 channel samples representing continuous sampling over 1 m intervals were collected from two separate outcrops along Graphite Creek. The channel samples are of biotite-quartz schist and subsequently contain low graphitic carbon values of <0.7% Cg. Bulk pit sampling was also conducted during 2012. Fifteen bulk samples of between 558 kg and 739 kg (totaling 9,916 kg) were collected from three different areas including Graphite Creek, Christophosen Creek and Child Drainage. Bulk pit sample analysis is pending.

A 2012 drill program completed 18 drillholes totaling 4,248 m. The majority of the drillholes (17 of the 18 drillholes) were collared in the central portion of the Property near Graphite Creek. These 17 drillholes are spaced about 200 m apart with infill drilling initiated on the western portion of the drill zone at a spacing of 50 m. With the exception of one drillhole (12GCH005; -87° dip), all drillholes were drilled at -49° to -51° dip to test the true thickness of mineralization; the graphite bearing rocks dip at approximately 60° to the northwest. The drill core was sampled approximately every metre (4,106 samples), which resulted in 208 samples yielding >10% Cg and 1,249 samples with >3% Cg. All drillholes encountered graphite mineralization including, for example, 173 m of 5.39% Cg with sub-intersections of 10.03% Cg over 55 m and 12.01% Cg over 42 m (drillhole 12GCH005), and 147 m of 4.0% Cg with sub-intersections of 6.56% Cg over 58 m and 10.14% Cg over 32 m (drillhole 12GCH006). The results confirm that graphite mineralization exposed at surface extends to vertical depths of over 225 m.

The 18th and last drillhole completed during the 2012 program represents a step-out hole to test graphite mineralization along the geophysical conductor. Drillhole 12GCH008 was collared approximately 2.2 km southwest of the main drill zone. Drill core analytical results include 177 m of 3.0% Cg including 6.02% Cg over 52 m and 7.07% Cg over 31 m. The step-out hole shows the potential for a southwesterly extension of graphite mineralization on the Property and potentially, continuous high-grade mineralization along entire length of the geophysical conductor.

With respect to flake size distribution, in 2011, Graphite One collected three 15 kg surficial rock grab samples of garnet-bearing schist. The samples visually contained: 1) high-grade massive; mixed high-grade and disseminated; and disseminated graphite. The samples were sent to Hazen Research, Inc. (Hazen), Golden, CO, and yielded 56.9%, 14.5% and 9.2% graphite, respectively. Samples were iteratively crushed and screened and found to contain 84.3%, 93.6% and 76.5% large flake graphite (being defined as greater than 80 mesh).

In 2012, five samples from drill core were selected for testing for flake size distribution and/or a Mineral Liberation Analyzer (MLA) test. Four of the samples were sent to Hazen and one sample was sent to Activation Laboratories Ltd., (“Activation” or “Actlabs”) in Thunder Bay, ON.

The samples which were sent to Hazen were from drillholes and yielded 8.7%, 13.7%, 14.9% and 8.0% graphite, respectively. Samples were iteratively crushed and screened and found to contain 62.9%, 70%, 63.9% and 59.3% large flake graphite, respectively. However, the authors believe these results are understated as Hazen did not capture any plus 10 mesh material which is known to contain up to 10.5% large flake from previous samples.

The fifth 2012 drill core sample collected for flake size distribution measurement was analyzed using the Mineral Liberation Analyzer at Activation Laboratories Ltd. The sample contained 6.68 weight per cent (wt. %) graphite, and most of the graphite occurs as liberated, free graphite. Fifty per cent of the graphite from this sample is plus 120 µm with approximately 15 wt. % of the graphite having a plus 40 mesh size with a small portion (0.13 wt. %) classifying within the 6.8 to 9.6 mesh range.

The maiden mineral resource estimate for Graphite Creek was prepared by Claude Duplessis, Eng., senior consultant for SGS Canada Inc. (“SGS”), and an independent Qualified Person under National Instrument (NI) 43-101, using the Canadian Institute of Mining, Metallurgy and Petroleum (“CIM”) Standards on Mineral Resources and Reserves, Definitions and Guidelines.

The data comprised a total of 18 diamond drillholes totalling 4,248 m. The data was imported into MICROMINE mining software, which included collar easting, northing and elevation coordinates, lithology information, bulk density (specific gravity) data, down hole surveys and assay data (graphitic carbon; % Cg). The Graphite Creek assay file comprised 4,106 analyses of variable length from all of the sampled lithologies. The drillhole samples were assayed for Cg using the LECO analytical method at Activation Laboratories Ltd. All drillholes were drilled at approximately 50º to the southeast (approximately 160º magnetic azimuth), with the exception of one drillhole which was drilled using a dip of at 87º. The initial setup of the drillholes was established using a compass and clinometer and the drillhole orientation was monitored using a digital multi-shot downhole survey camera.

The Graphite Creek Property is situated at the base of the north dipping Kigluaik Mountains. The graphite mineralization also dips at approximately 60º to the northwest and has been mapped in outcrop over the strike length of the deposit. The lode interpretation of the mineralized envelopes was carried out on drillhole cross sections which incorporated the geological mapping in the interpretation process. The mineralized envelopes were then converted to 3-dimensional (3D) solids using commercial mine planning software MICROMINE (v12.5.4). All mineralized envelopes were either truncated at the overburden or topographic surfaces.

A total of 17 diamond drillholes (of the 18 drillholes) were used to guide the geological interpretation and the resource estimation. Consequently the resource estimate area only represents a small subset portion (approximately 8%) of the total Graphite Creek Property. The diamond drilling was completed on drill sections that varied from 50 m to 320 m separation. The mineralized lodes extended far enough past the 2012 drill holes to ensure they were captured. The approximate resource dimensions comprise of 2.2 km of strike length, 140 to 230 m thickness and up to 420 m extension below the surface. These mineralized envelopes were then imported into GENESIS software where the estimation and geostatistical analysis was completed.

The raw assay sample widths ranged from 0.23 m to 3.97 m, which were then composited into a regular sample size of 2 m to support the anticipated block size that was used in the resource estimation. GENESIS was used to calculate the composites that were situated within the mineralized envelopes, which resulted in a total of 920 composites that were used for the final estimation.

The spatial continuity of the % graphite was reviewed using a combination of geostatistical analysis and calculated variograms. Difficulties were encountered with the calculation of the variograms, which is expected with the limited amount of drillhole information. It was noted that the variograms did not depict the continuous graphite mineralization that was observed in the field. Subsequently, nominal ranges were used for the estimation process based on the drillhole spacing and observations of geological continuity in the field.

A regularised block model was created within the mineralized envelopes that comprised a parent block size of 5 m X by 2 m Y by 5 m Z. No sub-blocking was applied to the block model. A conservative nominal density (specific gravity) of 2.7 kg/m^3 was used to calculate the tonnage of the resource area, which was derived from 4,104 core and rock grab measurements, collected using the air/water displacement method.

Based on geostatistical analysis of the % graphite and independent inspection and sampling by Mr. C. Duplessis it was decided that no capping should be applied to the composited samples. As % graphite is the only element of interest, graphite was the only element calculated during this resource estimation. The grade was estimated using inverse distance to the power of two in three separate passes. The search ellipsoid was increased with each pass.

The base case cut-off grade of 3% Cg is based on a conservative approach of 80% recovery for a 95% Graphite concentrate with average selling price of $1200/tonne. Economic criteria for selection of the 3.0% block cut off for the resource block model uses a 3 year trailing average price from the industrial minerals website (www.indmin.com). The assumption is the distribution of final product of 1/3 low value (800$/tonne), 1/3 medium value (1,200$/tonne) and 1/3 high value (1,600$/tonne). A mining cost of 5$/tonne plus a processing cost of 18$/tonne, plus 5$/tonne for General and Administration (G&A), plus 2$/tonne for environmental costs, totals 30$/tonne. This reflects a 3% cut-off grade based on 1,200$/tonne selling price (all expressed in USD$).

As the graphitic mineralization is outcropping on the hill side, a very low waste to ore ratio is envisaged for an open cut mining operation. Based on the above cut-offs and graphite mining and processing costs, the author, Mr. C. Duplessis feels it is justifiable to use a reporting cut-off value of 3.0% Cg in this Technical report.

The Graphite Creek maiden inferred resource has been classified as inferred. An ‘Inferred Mineral Resource’ is that part of a Mineral Resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drillholes.

A sensitivity analysis of the resource showing the expected tonnes, graphite % concentration and anticipated tonnes of in situ graphite at different graphite % cut-offs is presented in Table 1. The maiden (initial 2012) inferred resource estimate of the Graphite Creek Property uses a cut-off grade of 3.0% Cg and includes 107.2 million tonnes of mineralized graphite at a graphite LECO grade of 5.78% Cg. Based on this tonnage and grade, the in situ graphite is 6.2 million tonnes. The size and estimated in situ graphite tonnage is considered to display sufficiently high enough concentrations to be deemed to represent potential for future economic extraction. It should be noted that the resource is completely open along strike on both ends and open down dip from the existing drilling.

Table 1. Graphite Creek Maiden Inferred Resource estimate reported at cut-offs of 2.0%, 3.0%, 5.0%, 7.0% and 10.0% graphitic carbon. The recommended inferred resource is at a cut-off of 3.0 graphitic carbon.

Cut-off grade (% Cg [1]) by LECO	Tonnage (million)	Graphite % (Cg) by LECO	In situ graphite (metric tonnes [3])
2.0	164.5	4.61	7,583,450
3.0 [2]	**107.2**	**5.78**	**6,196,160**
5.0	54.98	7.66	4,211,468
7.0	25.44	9.69	2,465,136
10.0	7.8	13.49	1,052,220

[1] Cg - graphitic carbon

[2] This inferred resource recommends using a 3.0% Cg cut-off

[3] metric tonne = 1,000 kg (2,204.6 lbs)

Note 1: The resource estimate does not include the graphite schist that was intersected in drillhole 12GCH0008, which is located 2.2 km southwest of the Graphite Creek Maiden Inferred Resource area.

Mineral resources are not mineral reserves and do not have demonstrated economic viability. The estimate of mineral resources may be materially affected by geology, environmental, permitting, legal, taxation, socio-political, marketing or other relevant issues. The quality and grade of the reported inferred resource in this estimation is uncertain in nature and there has been insufficient exploration to define these inferred resources as an indicated or measured mineral resource, and it is uncertain if further exploration will result in upgrading them to an indicated or measured resource category.

At the same time as the Graphite Creek maiden inferred resource was calculated, Mr. C. Duplessis of SGS was contracted to determine the potential resource given the potential for the mineralization to be to the southwest. The area of interest extends 2.2 km southwest from the outer contact of the current inferred resource to drillhole 12GCH008. Continuity of the mineralization extending from the maiden inferred resource to drillhole 12GCH008 is supported by a combination of a consistent airborne electromagnetic geophysical anomaly, detailed geological mapping and surface rock grab sampling. Drillhole 12GCH008 was designed to test the strike extension of the geophysical anomaly and intersected significant graphite mineralisation consisting of 52 m of 6.09 % graphite. A combination of all of these factors highlights the potential for the resource to increase the existing maiden inferred resource.

In a preliminary fashion, therefore, the approximate tonnage and grade of a potential resource extension can be determined by taking the results from drillhole 12GCH008 (52 m of 6.02% Cg) plus or minus 30 per cent grade, and considering the strike extent from the existing inferred resource. Using estimated tonnages and grades of 235-492 million tonnes and 4.2-7.9% Cg, respectively, the potential in situ graphite of 9.9-38.9 million tonnes might be present if the Maiden Inferred Graphite Creek Resource estimate is extrapolated to the southwest (Table 2).

Table 2. Potential in situ graphite of the Graphite Creek Property based on a southwestern extension of the Maiden Inferred Graphite Creek Resource estimate.

Tonnage (million)	Graphite % (Cg) by LECO	In situ graphite (metric tonnes)
235 to 492	4.2 to 7.9	9,870,000 to 38,868,000

Note 1: The potential quantity and grade presented in this table is conceptual in nature. There has been insufficient exploration to define an inferred mineral resource and it is uncertain if further exploration will result in the target being delineated as a mineral resource.

To conclude, the Graphite Creek Property represents a significant large-flake graphite exploration target. The results of the 2011 and 2012 exploration and the Graphite Creek Maiden Inferred Resource estimate are summarized as follows.

- 2012 geological mapping, surface sampling and diamond drilling has confirmed the presence of graphitic mineralization at Graphite One Resources Inc.'s Graphite Creek Property. High-grade massive, segregated and disseminated graphite is associated with a series of sillimanite-garnet-biotite-quartz schist layers. Low- to moderate-grade disseminated graphite is associated with biotite-quartz (±garnet) schist.

- Analyses of exposed bedrock from throughout the Property contains moderate to abundant graphite. Of the 591 grab samples collected in 2012, 11 samples yielded >45% Cg (up to 80.9% Cg), 47 samples had >10% Cg and 137 samples contain >3% Cg.

- The 2012 rock sample results also show that graphite-bearing sillimanite-garnet-biotite-quartz schistose rocks continue outside the Maiden Inferred Resource Estimate area. For example,

    - One sample collected in the eastern part of the Property contained 80.9% Cg from a 1.0 x 3.0 m lens of graphite in moderately silicified schistose rocks.

    - At higher elevations in the southern part of the Property, two samples contained 56.6% Cg and 61.1% Cg in graphite-rich segregated lenses that were 30-40 cm wide and up to 2 m long in sillimanite-garnet-biotite-quartz schist.

- Graphite mineralization was encountered in all eighteen 2012 drillholes. The graphite mineralization typically occurs throughout the length of the drill cores. For example, drillhole 12GC007 contains 4.02% Cg over 164 m between depths of 59 m and 223 m.

- The analytical results for drill core from the 18 drillholes includes 29 samples yielding >30% Cg, 208 samples with >10% Cg and 1,249 samples containing >3% Cg. Examples of selected results from individual drillholes include:

    - Drillhole 12GC004: 48 m of 4.63% Cg with sub-intersections of 4.45 m of 10.86% Cg and 1.65 m of 21.85% Cg;

    - Drillhole 12GCH005: 173 m of 5.39% Cg with sub-intersections of 10.03% Cg over 55 m and 12.01% Cg over 42 m;

    - Drillhole 12GCH006: 147 m of 4.0% Cg with sub-intersections of 6.56% Cg over 58 m and 10.14% Cg over 32 m; and

  - Drillhole 12GC010: 173.55 m of 3.80% Cg with a sub-intersection of 20.55 m of 11.49% Cg

- The host schist interval was historically reported to be about 100 m thick and exposed over dip lengths of 100 to 200 m. Based on results of a 2012 time-domain, helicopter-borne electromagnetic survey over the Graphite Creek Property, the drill tested and proven graphitic conductor is now believed to strike continually for over 18 km while the depth of graphite-mineralization confirmed in drill core is in excess of 225 m.

- Graphite flake size distribution shows that surficial rock grab and drill core samples contain between 59.3% and 93.6% large flake graphite (defined as graphite flake sizes that are greater than 80 mesh).

- The size of the graphite in the 10 to 40 mesh fraction varies between 20 and 1,500 µm in the long dimension with an average size of about 50–200 µm. The graphite is present as: minute scales or flakes; fine, undulated stringers along schist planes; liberated lath-shaped or tabular-foliated crystals; or as blocky and irregular deformed particles.

- The graphite-bearing rocks are exposed at surface along a dip slope of approximately 40º to 75º providing an ideal scenario for a low waste to ore strip ratio in an open pit mining operation.

- The maiden (initial 2012) inferred resource estimate of the Graphite Creek Property uses a series of cut-off grades. At a 3.0% Cg cut-off the resource includes 107.2 million tonnes of mineralized graphite at a graphite grade of 5.78% Cg. Based on this tonnage and grade, the in situ graphite is 6.2 million tonnes.

- The Graphite Creek Maiden Inferred Mineral Resource Estimate area is associated with a sub-portion of the Graphite Creek Property encompassing the main area of 2012 drilling. The estimate area is about 5.6 square kilometres in size, and subsequently, it is important to point out that the resource estimate reports only on about 8% of the potential strike length of the geophysical anomaly thought to be associated with graphite mineralization.

- A single ‘step-out’ drillhole, 12GCH008, which was drilled about 2.2 km west of the main drill cluster and maiden resource estimate area, contains 6.02% Cg over 52 m and 7.07% Cg over 31 m. Graphite mineralization in the step-out drillhole 12GCH008, together with airborne geophysical, surface mapping and sampling, provide evidence that the graphite mineralization extends on surface and at depth along strike to include a southwesterly extension of the current Maiden Inferred Graphite Creek resource estimate area.

- In a preliminary fashion, therefore, the approximate tonnage and grade of a potential resource extension can be determined by taking the results from drillhole 12GCH008 (52 m of 6.09% Cg) plus or minus 30 per cent grade, and considering the strike extent from the existing inferred resource. Using estimated tonnages and grades of 235-492 million tonnes and 4.2-7.9% Cg, respectively, the potential in situ graphite of 9.9-38.9 million tonnes might be present if the Maiden Inferred Graphite Creek Resource estimate is extrapolated to the southwest. The potential quantity and grade presented in this bullet point is conceptual in nature. There has been insufficient exploration to define an inferred mineral resource and it is uncertain if further exploration will result in the target being delineated as a mineral resource.

Follow-up exploration at the Graphite Creek Property is highly recommended based on results from: 1) Historic work; 2) the 2012 airborne geophysical survey; 3) surficial rock grab and channel samples; 4) Property geological mapping; 5) flake size distribution analyses; 6) drilling; and, 7) a sizeable inferred resource as documented in this Technical Report.

The total cost to complete a recommended 2013 exploration program is USD$9,100,000 (not including contingency). With a 10% contingency the total budget is USD$10,010,000 (Table 3). The recommendations include but not are limited to:

1) Complete infill drilling in the Graphite Creek Maiden Inferred Resource estimate area at a drill spacing that is sufficient to work towards a refined indicated and/or measured resource estimate, which will be part of a Preliminary Economic Assessment (PEA) study. This should include approximately 8,000 m of drilling or sixty-five 120 m deep drillholes. The drillholes should be completed at 50 m spacing and every section should have at least 2 holes. As well, approximately 4 reconnaissance drill holes should be completed along the EM anomaly to test the grade and depth extent of the mineralization along the 18 km long geophysical trend. The approximate cost to complete the drilling is USD$4,800,000;

2) Complete detailed mineralogy and metallurgical testing both at bench scale and mini-test plant scale. The testing should be completed from in-situ material (witness core and rejects and mini-bulk surface samples) to produce graphite concentrates to evaluate the potential quality and recovery rates for a saleable graphite product. The characteristics should allow an appraisal of value within the market and assist in the completion of a PEA. As well, homogenized mineralized and non-mineralized sample standards should be sourced for future resource work. The estimated budget to complete the mineralogy and metallurgy is approximately USD$1,200,000;

3) Complete baseline environmental studies at and near the Property (USD$600,000);

4) Complete engineering studies as part of the PEA (USD$500,000). The study should look at logistics, mine planning, infrastructure, mining, milling and processing, etc.;

5) Initiate permitting in anticipation of mine development including community consultations and relations (USD$500,000); and,

6) The comprehensive 2013 program management, consulting contracts and reporting (PEA, updated resource, NI 43-101's) have an estimated budget of USD$1,500,000.

Table 3. Recommended 2013 exploration program budget at the Graphite Creek Property.

No.	Item	Description	Cost $USD
1	Drilling	8,000 meters to make an indicated & measured resource and test the EM Anomaly along strike	$4,800,000
2	Mineralogy/metallurgy	Bench scale and larger scale testing to determine the characteristics and appraisal of a saleable graphite concentrate from the Property	$1,200,000
3	Environmental	Baseline studies to be included as part of the Preliminary Economic Assessment	$600,000
4	Engineering	Logistics, mining, milling & processing etc.	$500,000
5	Permitting	Initial permitting towards developing a mine at the Property including community consultation and relations	$500,000
6	Project management; consulting & reporting	Updated resource reports; NI 43-101; Preliminary Economic Assessment and overall project management	$1,500,000
	CONTINGENCY (10%)		$910,000
		TOTAL ESTIMATED COST – 2013 EXPLORATION	**$10,010,000**

2 Introduction

During 2012, Graphite One Resources Inc. ("Graphite One") acquired a stratigraphic series of graphite deposits, or showings, on the Seward Peninsula of Alaska, 59 km north of Nome, Alaska (Figure 1). The Graphite Creek Property (the "Property") comprises 129 claims totaling 16,801 acres (6,799 hectares), on the northern flank of the Kigluaik Mountains (Figure 2). The Property is located approximately 3 km inland from intertidal waters at Windy Cove (Imuruk Basin), 20 km away from seasonal roads and 3 km from an airstrip to the east.

The graphite showings were discovered after the 1898 Cape Nome gold rush, and were intermittently mined from 1907 to 1920 with some 580 tonnes of hand-sorted graphite mined from talus and adits. The graphite showings are historically characterized as a series of high-grade graphite showings. Graphite segregations (lenses and streaks) of semi-massive to massive graphite and disseminated graphite are known to crop out in schistose host rocks exposed along incised creek valleys. The graphitic interval was historically reportedly to be continuous over 5 km of strike length with a thickness of 100 m, and exposed over dip lengths of 100 to 200 m. The dimensions of the graphite showings and their potential to host economic concentrations of graphite are significantly updated in this Technical Report.

APEX Geoscience Ltd. ("APEX") was retained by Graphite One to oversee a 2012 exploration campaign that included a review of historical exploration and government work on their Property, a 1,523.5 line-kilometre Time Domain Electromagnetic (TDEM) survey, geological mapping, bedrock sampling, including grab (n=591), channel (n=32) and bulk pit (n=15) samples, and an 18 hole drill program that cored 4,248 m. Total expenditures for 2011 and 2012 exceed CDN$4,800,000 (Appendix 1).

The 2012 program confirmed the presence of graphitic mineralization at Graphite One Resources Inc.'s Graphite Creek Property. High-grade massive, segregated and disseminated graphite is associated with a series of sillimanite-garnet-biotite-quartz schist layers. Low- to moderate-grade disseminated graphite is associated with biotite-quartz (±garnet) schist that essentially surrounds the high-grade layers. Analyses of bedrock grab samples and drill core yielded up to 80.9 percent Graphitic Carbon (% Cg) and 59.1% Cg, respectively. Graphite mineralization was recovered in all 18 drillholes. Single hole results include 173 m of 5.39% Cg with sub-intersections of 10.03% Cg over 55 m and 12.01% Cg over 42 m (drillhole 12GCH005), and 147 m of 4.0% Cg with sub-intersections of 6.56% Cg over 58 m and 10.14% Cg over 32 m (drillhole 12GCH006). The results confirm that graphite mineralization exposed at surface extends to vertical depths of over 225 m. Results from the time-domain, helicopter-borne electromagnetic survey suggest that the graphitic conductor strikes continually for over 18 km.

Based on these positive results, Graphite One commissioned SGS Canada Inc. ("SGS") Geostat Minerals Group to supervise the preparation of a Maiden Inferred Mineral Resource Estimate that is classified in accordance with guidelines established by the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") "Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines" dated November 23rd, 2003 and CIM "Definition Standards for Mineral Resources and Mineral Reserves" dated November 27th, 2010. The maiden mineral resource estimate was prepared by Claude Duplessis, Eng., Senior Consultant for SGS, and he is an independent Qualified Person (QP) under National Instrument (NI) 43-101, using the Canadian Institute of Mining, Metallurgy and Petroleum Standards on Mineral Resources and Reserves, Definitions and Guidelines. The effective date of the mineral resource is December 3rd 2012.

The Graphite Creek Maiden Inferred Mineral Resource Estimate area is associated with a sub-portion of the Graphite Creek Property encompassing the main area of 2012 drilling. The estimate area is about 5.6 square kilometres in size, and subsequently, it is important to point out that the resource estimate reports only on about 8% of the potential strike length of the geophysical anomaly thought to be associated with graphite mineralization.

Mr. C. Duplessis, Eng., consultant for SGS, supervised the preparation of section 14, the maiden resource estimate, and contributed to sections 1, 16, 17 and 18. Contributions within section 14 and resource work including data entry into commercial mine planning software MICROMINE (v12.5.4) and three-dimensional geological and mineralization interpretation of the solids was completed by Mr. S. Nicholls, MAIG, of APEX Geoscience Ltd. and a Qualified Person, under the direct supervision of and Mr. R. Eccles, P.Geol. and C. Duplessis Eng. The Resource estimation has been completed by C. Duplessis Eng. using GENESIS (v1.1.17) software. Mr. Duplessis and Mr. S. Nicholls visited the Graphite Creek Property from October 30 to November 2, 2012. Mr. C. Duplessis and Mr. S. Nicholls had no previous experience with Graphite One, the Property or the general Property area.

Mr. R. Eccles, P.Geol., of APEX Geoscience Ltd. supervised the preparation of sections 1 through 13 and sections 16 through 18 of the Technical Report, and contributed to sections 14 and 15. Mr. Eccles is a Qualified Person as defined by the Canadian Securities Administration (“CSA”) National Instrument (NI) 43-101. Mr. Eccles is a Professional Geologist with the Association of Professional Engineers and Geoscientists of Alberta (“APEGA”), and has worked as a geologist for more than 26 years since his graduation from University. Mr. Eccles has been involved in all aspects of mineral exploration and mineral resource estimations for metallic and industrial mineral projects and deposits. Mr. Eccles visited the Graphite Creek Property on May 8-9, 2012. Prior to this report and field visit, Mr. Eccles had no previous experience with Graphite One, the Property or the general Property area.

The authors relied on numerous historical geological summaries of the graphite showings for this report. In particular, government Open-File Reports and miscellaneous field studies conducted by the United States Geological Survey (e.g., Harrington, 1919; Coats, 1944; Sainsbury, 1972; Cobb, 1972, 1975, 1981a, 1981b; Weiss, 1973; Hudson and Plafker, 1978; Hudson, 1981, 1998; Swainbank et al., 1995). In addition, the authors utilize information from various historical company accounts (e.g., Wolgemuth, 1982; Bentzen, 1995) and work completed by Graphite One (then Cedar Mountain) and/or by laboratories contracted by Graphite One (e.g., Activation Laboratories Ltd., 2011, 2012; Nelson, 2011; Londono, 2012).

Figure 1. General location of Graphite One Resources Inc. Property in Alaska.

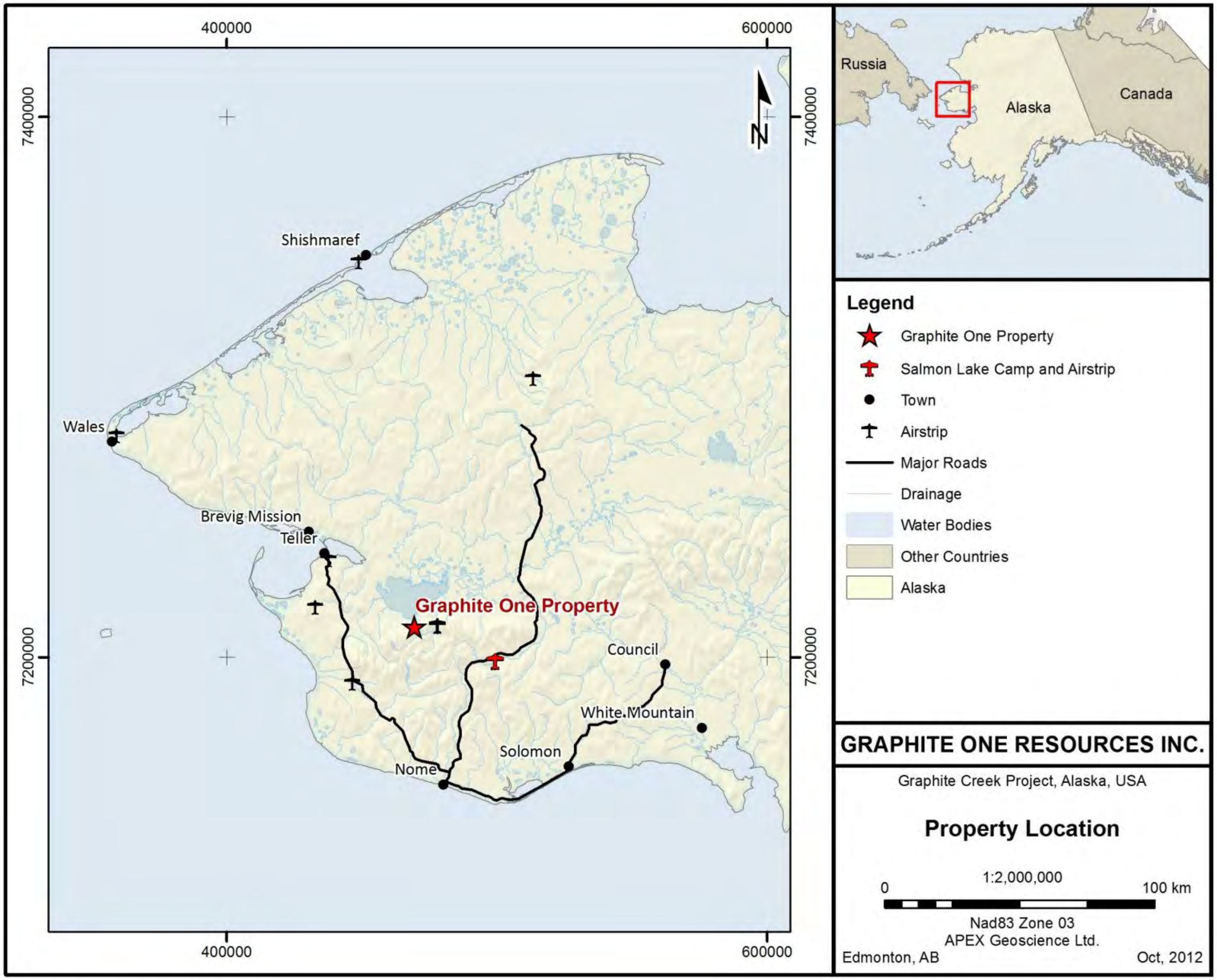
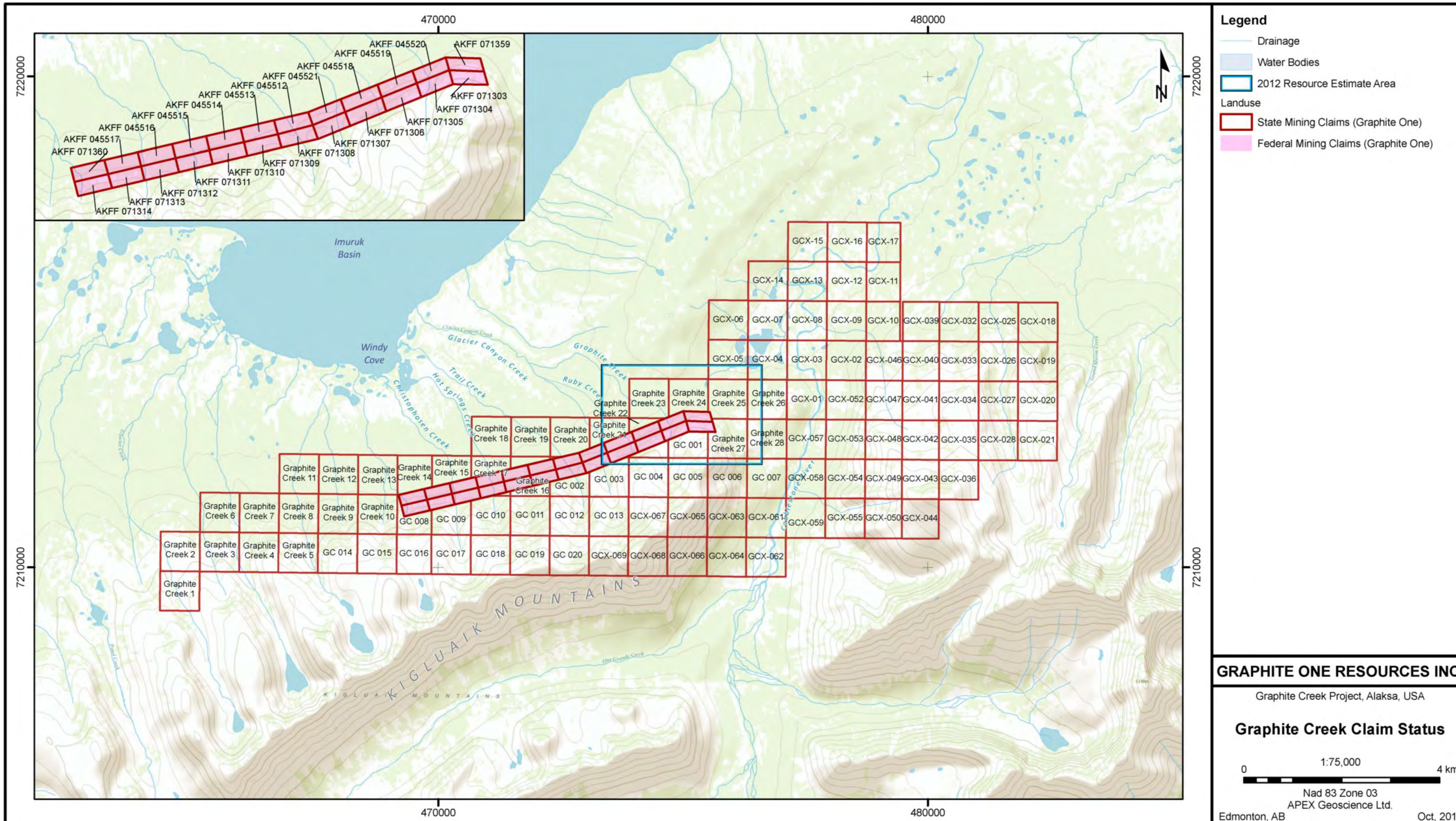


Figure 2. Graphite One Resource Inc. land holdings on the west side of the Kigluaik Mountains.



Government reports were prepared by qualified persons holding post-secondary geology, or related university degree(s), prior to the implementation of the standards relating to NI 43-101. Based on the review of historical accounts of the Kigluaik Graphite showings and a Property visit conducted by the R. Eccles, the background reports written by people whom are not qualified persons are assumed to be reasonably accurate. These reports are reviewed and referenced predominantly in the ‘History’ and ‘Geological Setting’, ‘Mineralization’ and ‘Exploration’ sections.

3 Reliance on Other Experts

The authors of this Technical Report are not qualified to comment on issues related legal agreements, royalties, permitting, and environmental matters. The authors have relied upon the representations and documentations supplied by the Company management.

The Graphite Creek Property comprises 129 contiguous claims totaling 16,801 acres (6,799 hectares). The land package can be broken down into 105 Alaska state mining claims and 24 Federal mining claims. Of these, Graphite One owns 100% interest in 77 claims. Graphite One also acquired a 100% interest in 28 claims from a private individual for CDN$20,000 along with a 2% production royalty which can be purchased in the first three years for a payment of CDN$1,000,000. With respect to the Federal mining claims, Graphite One entered an option agreement to earn 100% interest in claims encompassing known graphite showings over a three year period through exploration work totaling approximately $1.525 million.

The Graphite Creek graphite showings crop out primarily on 24 Federal mining claims (Figure 2). The Federal claims were staked prior to conveyance of surrounding lands to the State of Alaska and have been diligently maintained for several generations. State-of-Alaska lands open to mineral entry cover the area of known graphite showings and completely surround the Federal claims. Remaining lands in the area include Federal lands managed by the Bureau of Land Management (“BLM”) and lands along the shore of the Imuruk Basin held by Native individuals or groups.

The authors have reviewed the mining titles, their status, the legal agreement and technical data supplied by Graphite One, and any public sources of relevant technical information. The Alaska Department of Natural Resources Land Administration System, which is the authoritative data source for all state land records (http://akmining.info/), shows that the map designated claims are active and in good standing as of October 13, 2012. Both the State and Federal claims require annual rents and labour. Rent on all claims is due September 1, 2013 (completed) with documentation of 2012 labour due by Nov 30th (filed).

Unlike common metals, graphite is not sold on public exchanges and evaluating their prices is not straightforward. Prices for this product tend to fluctuate strongly due to:

1) a relatively small and growing market;

2) limited production outside of China; and,

3) speculation as to the future demand.

For this study graphite prices were derived from price database average obtained from industrial minerals website www.indmin.com. Comparisons were also made with other recent technical reports and price assumptions available which showed that the price assumptions were well within range of other experts. These prices were used to establish a minimum cut-off grade for the % graphite.

4 Property Description and Location

The Graphite Creek Property is located on the north flank of the Kigluaik Mountains, Seward Peninsula, Alaska (Figure 1). The Kigluaik Mountains are a rugged range located about 40 km north of Nome, Alaska. Stretching 65 km east to west, these mountains are rarely visited. Mount Osborn is the tallest of the Kigluaik Mountains; at 1,437 m, it’s the highest point on Alaska’s remote Seward Peninsula. Mount Osborn’s shorter siblings rise 600 to 1,200 m above long (<1.2 km wide), narrow swampy valleys.

The graphite showings crop out in incised creek valleys that are orientated perpendicular to the northern Kigluaik Mountain front. The Property is located approximately 59 km north of the city of Nome, Alaska, and 42 km southeast of the small aboriginal settlement of Teller. The Property is located mostly within the southeast corner of the United States Geological Survey (“USGS”) 1:24,000 scale Teller A-2 quadrangle map, with a small portion lying within the Teller A-1 quadrangle map.

The graphite exposures are situated at about 230 m elevation, just upslope of the surface trace of the reactived Kigluaik normal fault (Hudson and Plafker, 1978). The graphite-bearing rocks are only known to occur in the footwall part of this fault.

The Graphite Creek Property consists of a total of 129 claims, 105 Alaska state mining claims (Table 4) and 24 Federal mining claims (Table 5), covering a total area of 16,801 acres (6,799 hectares). The state mining claims are registered in the name of Cedar Mountain Exploration Inc., while the Federal claims are held by three individuals (E. Riffey, M. Jong and W. Tweet; Table 5).

While the State claim names are in Cedar Mountain Exploration (Alaska) Inc. (“Cedar”). Cedar officially changed its name to Graphite One Resources Inc. in March 2012 (Graphite One Resources, Inc. 2012), however, Cedar Mountain Exploration (Alaska) Inc. is a wholly owned subsidiary of Graphite One (Tables 4 and 5).

The deals to secure the Properties 129 claims were five-phase.

1) During January 2012, Graphite One entered an option agreement to earn 100% interest in 24 Federal mining claims encompassing the historical Graphite Creek showings over a three year period through exploration work totaling approximately $1.525 million, which Graphite One has completed with its 2012 summer exploration program.

Table 4. Graphite Creek Property Alaska State Mining Claims. All claims are a full quarter section (160 acres).

Claim number	Claim name	Claimant	Township(s)	Stake Date
ADL 710772	GC 001	Cedar Mountain Exploration (Alaska) Inc	K005S034W22	22-Nov-11
ADL 710773	GC 002	Cedar Mountain Exploration (Alaska) Inc	K005S034W28	22-Nov-11
ADL 710774	GC 003	Cedar Mountain Exploration (Alaska) Inc	K005S034W28	22-Nov-11
ADL 710775	GC 004	Cedar Mountain Exploration (Alaska) Inc	K005S034W27	22-Nov-11
ADL 710776	GC 005	Cedar Mountain Exploration (Alaska) Inc	K005S034W27	22-Nov-11
ADL 710777	GC 006	Cedar Mountain Exploration (Alaska) Inc	K005S034W26	22-Nov-11
ADL 710778	GC 007	Cedar Mountain Exploration (Alaska) Inc	K005S034W26	22-Nov-11
ADL 710779	GC 008	Cedar Mountain Exploration (Alaska) Inc	K005S034W30	22-Nov-11
ADL 710780	GC 009	Cedar Mountain Exploration (Alaska) Inc	K005S034W30	22-Nov-11
ADL 710781	GC 010	Cedar Mountain Exploration (Alaska) Inc	K005S034W29	22-Nov-11
ADL 710782	GC 011	Cedar Mountain Exploration (Alaska) Inc	K005S034W29	22-Nov-11
ADL 710783	GC 012	Cedar Mountain Exploration (Alaska) Inc	K005S034W28	22-Nov-11
ADL 710784	GC 013	Cedar Mountain Exploration (Alaska) Inc	K005S034W28	22-Nov-11
ADL 710785	GC 014	Cedar Mountain Exploration (Alaska) Inc	K005S035W36	22-Nov-11
ADL 710786	GC 015	Cedar Mountain Exploration (Alaska) Inc	K005S035W36	22-Nov-11
ADL 710787	GC 016	Cedar Mountain Exploration (Alaska) Inc	K005S034W31	22-Nov-11
ADL 710788	GC 017	Cedar Mountain Exploration (Alaska) Inc	K005S034W31	22-Nov-11
ADL 710789	GC 018	Cedar Mountain Exploration (Alaska) Inc	K005S034W32	22-Nov-11
ADL 710790	GC 019	Cedar Mountain Exploration (Alaska) Inc	K005S034W32	22-Nov-11
ADL 710791	GC 020	Cedar Mountain Exploration (Alaska) Inc	K005S034W33	22-Nov-11
ADL 617072	GCX-01	Cedar Mountain Exploration (Alaska) Inc	K005S034W24	4-Jun-12
ADL 617073	GCX-02	Cedar Mountain Exploration (Alaska) Inc	K005S034W13	4-Jun-12
ADL 617074	GCX-03	Cedar Mountain Exploration (Alaska) Inc	K005S034W13	4-Jun-12
ADL 617075	GCX-04	Cedar Mountain Exploration (Alaska) Inc	K005S034W14	4-Jun-12
ADL 617076	GCX-05	Cedar Mountain Exploration (Alaska) Inc	K005S034W14	4-Jun-12
ADL 617077	GCX-06	Cedar Mountain Exploration (Alaska) Inc	K005S034W14	4-Jun-12
ADL 617078	GCX-07	Cedar Mountain Exploration (Alaska) Inc	K005S034W14	4-Jun-12
ADL 617079	GCX-08	Cedar Mountain Exploration (Alaska) Inc	K005S034W13	4-Jun-12
ADL 617080	GCX-09	Cedar Mountain Exploration (Alaska) Inc	K005S034W13	4-Jun-12
ADL 617081	GCX-10	Cedar Mountain Exploration (Alaska) Inc	K005S033W18	4-Jun-12
ADL 617082	GCX-11	Cedar Mountain Exploration (Alaska) Inc	K005S033W07	4-Jun-12
ADL 617083	GCX-12	Cedar Mountain Exploration (Alaska) Inc	K005S034W12	4-Jun-12
ADL 617084	GCX-13	Cedar Mountain Exploration (Alaska) Inc	K005S034W12	4-Jun-12
ADL 617085	GCX-14	Cedar Mountain Exploration (Alaska) Inc	K005S034W11	4-Jun-12
ADL 617086	GCX-15	Cedar Mountain Exploration (Alaska) Inc	K005S034W12	4-Jun-12
ADL 617087	GCX-16	Cedar Mountain Exploration (Alaska) Inc	K0055034W12	4-Jun-12
ADL 617088	GCX-17	Cedar Mountain Exploration (Alaska) Inc	K005S034W07	4-Jun-12
ADL 710571	GRAPHITE CREEK 1	Cedar Mountain Exploration (Alaska) Inc	K005S035W34	29-Oct-11
ADL 710580	GRAPHITE CREEK 10	Cedar Mountain Exploration (Alaska) Inc	K005S035W25	29-Oct-11
ADL 710581	GRAPHITE CREEK 11	Cedar Mountain Exploration (Alaska) Inc	K005S035W26	29-Oct-11

Table 4. continued.

Claim number	Claim name	Claimant	Township(s)	Stake Date
ADL 710582	GRAPHITE CREEK 12	Cedar Mountain Exploration (Alaska) Inc	K005S035W25	29-Oct-11
ADL 710583	GRAPHITE CREEK 13	Cedar Mountain Exploration (Alaska) Inc	K005S035W25	29-Oct-11
ADL 710584	GRAPHITE CREEK 14	Cedar Mountain Exploration (Alaska) Inc	K005S034W30	29-Oct-11
ADL 710585	GRAPHITE CREEK 15	Cedar Mountain Exploration (Alaska) Inc	K005S034W30	29-Oct-11
ADL 710586	GRAPHITE CREEK 16	Cedar Mountain Exploration (Alaska) Inc	K005S034W29	29-Oct-11
ADL 710587	GRAPHITE CREEK 17	Cedar Mountain Exploration (Alaska) Inc	K005S034W29	29-Oct-11
ADL 710588	GRAPHITE CREEK 18	Cedar Mountain Exploration (Alaska) Inc	K005S034W20	29-Oct-11
ADL 710589	GRAPHITE CREEK 19	Cedar Mountain Exploration (Alaska) Inc	K005S034W20	29-Oct-11
ADL 710572	GRAPHITE CREEK 2	Cedar Mountain Exploration (Alaska) Inc	K005S035W34	29-Oct-11
ADL 710590	GRAPHITE CREEK 20	Cedar Mountain Exploration (Alaska) Inc	K005S034W21	29-Oct-11
ADL 710591	GRAPHITE CREEK 21	Cedar Mountain Exploration (Alaska) Inc	K005S034W21	29-Oct-11
ADL 710592	GRAPHITE CREEK 22	Cedar Mountain Exploration (Alaska) Inc	K005S034W22	29-Oct-11
ADL 710593	GRAPHITE CREEK 23	Cedar Mountain Exploration (Alaska) Inc	K005S034W22	29-Oct-11
ADL 710594	GRAPHITE CREEK 24	Cedar Mountain Exploration (Alaska) Inc	K005S034W22	29-Oct-11
ADL 710595	GRAPHITE CREEK 25	Cedar Mountain Exploration (Alaska) Inc	K005S034W23	29-Oct-11
ADL 710596	GRAPHITE CREEK 26	Cedar Mountain Exploration (Alaska) Inc	K005S034W23	29-Oct-11
ADL 710597	GRAPHITE CREEK 27	Cedar Mountain Exploration (Alaska) Inc	K005S034W23	29-Oct-11
ADL 710598	GRAPHITE CREEK 28	Cedar Mountain Exploration (Alaska) Inc	K005S034W23	29-Oct-11
ADL 710573	GRAPHITE CREEK 3	Cedar Mountain Exploration (Alaska) Inc	K005S035W34	29-Oct-11
ADL 710574	GRAPHITE CREEK 4	Cedar Mountain Exploration (Alaska) Inc	K005S035W35	29-Oct-11
ADL 710575	GRAPHITE CREEK 5	Cedar Mountain Exploration (Alaska) Inc	K005S035W35	29-Oct-11
ADL 710576	GRAPHITE CREEK 6	Cedar Mountain Exploration (Alaska) Inc	K005S035W27	29-Oct-11
ADL 710577	GRAPHITE CREEK 7	Cedar Mountain Exploration (Alaska) Inc	K005S035W26	29-Oct-11
ADL 710578	GRAPHITE CREEK 8	Cedar Mountain Exploration (Alaska) Inc	K005S035W26	29-Oct-11
ADL 710579	GRAPHITE CREEK 9	Cedar Mountain Exploration (Alaska) Inc	K005S035W25	29-Oct-11
ADL 617610	GCX-069	Cedar Mountain Exploration (Alaska) Inc	K005S034W33	8-Sep-12
ADL 617609	GCX-068	Cedar Mountain Exploration (Alaska) Inc	K005S034W34	8-Sep-12
ADL 617608	GCX-067	Cedar Mountain Exploration (Alaska) Inc	K005S034W27	8-Sep-12
ADL 617606	GCX-065	Cedar Mountain Exploration (Alaska) Inc	K005S034W27	8-Sep-12
ADL 617607	GCX-066	Cedar Mountain Exploration (Alaska) Inc	K005S034W34	8-Sep-12
ADL 617605	GCX-064	Cedar Mountain Exploration (Alaska) Inc	K005S034W35	29-Aug-12
ADL 617604	GCX-063	Cedar Mountain Exploration (Alaska) Inc	K005S034W26	8-Sep-12
ADL 617602	GCX-061	Cedar Mountain Exploration (Alaska) Inc	K005S034W26	29-Aug-12
ADL 617603	GCX-062	Cedar Mountain Exploration (Alaska) Inc	K005S034W35	29-Aug-12
ADL 617601	GCX-059	Cedar Mountain Exploration (Alaska) Inc	K005S034W25	29-Aug-12
ADL 617600	GCX-058	Cedar Mountain Exploration (Alaska) Inc	K005S034W25	29-Aug-12
ADL 617599	GCX-057	Cedar Mountain Exploration (Alaska) Inc	K005S034W24	29-Aug-12
ADL 617598	GCX-055	Cedar Mountain Exploration (Alaska) Inc	K005S034W25	29-Aug-12
ADL 617597	GCX-054	Cedar Mountain Exploration (Alaska) Inc	K005S034W25	29-Aug-12
ADL 617596	GCX-053	Cedar Mountain Exploration (Alaska) Inc	K005S034W24	29-Aug-12

Table 4. continued.

Claim number	Claim name	Claimant	Township(s)	Stake Date
ADL 617595	GCX-052	Cedar Mountain Exploration (Alaska) Inc	K005S034W24	29-Aug-12
ADL 617590	GCX-046	Cedar Mountain Exploration (Alaska) Inc	K005S033W18	29-Aug-12
ADL 617591	GCX-047	Cedar Mountain Exploration (Alaska) Inc	K005S033W19	29-Aug-12
ADL 617592	GCX-048	Cedar Mountain Exploration (Alaska) Inc	K005S033W19	8-Sep-12
ADL 617593	GCX-049	Cedar Mountain Exploration (Alaska) Inc	K005S033W30	8-Sep-12
ADL 617594	GCX-050	Cedar Mountain Exploration (Alaska) Inc	K005S033W30	8-Sep-12
ADL 617589	GCX-044	Cedar Mountain Exploration (Alaska) Inc	K005S033W30	8-Sep-12
ADL 617588	GCX-043	Cedar Mountain Exploration (Alaska) Inc	K005S033W30	8-Sep-12
ADL 617587	GCX-042	Cedar Mountain Exploration (Alaska) Inc	K005S033W19	8-Sep-12
ADL 617586	GCX-041	Cedar Mountain Exploration (Alaska) Inc	K005S033W19	29-Aug-12
ADL 617585	GCX-040	Cedar Mountain Exploration (Alaska) Inc	K005S033W18	29-Aug-12
ADL 617584	GCX-039	Cedar Mountain Exploration (Alaska) Inc	K005S033W18	29-Aug-12
ADL 617579	GCX-032	Cedar Mountain Exploration (Alaska) Inc	K005S033W17	29-Aug-12
ADL 617580	GCX-033	Cedar Mountain Exploration (Alaska) Inc	K005S033W17	29-Aug-12
ADL 617575	GCX-025	Cedar Mountain Exploration (Alaska) Inc	K005S033W17	29-Aug-12
ADL 617571	GCX-018	Cedar Mountain Exploration (Alaska) Inc	K005S033W16	29-Aug-12
ADL 617572	GCX-019	Cedar Mountain Exploration (Alaska) Inc	K005S033W16	29-Aug-12
ADL 617576	GCX-026	Cedar Mountain Exploration (Alaska) Inc	K005S033W17	29-Aug-12
ADL 617581	GCX-034	Cedar Mountain Exploration (Alaska) Inc	K005S033W20	29-Aug-12
ADL 617577	GCX-027	Cedar Mountain Exploration (Alaska) Inc	K005S033W20	29-Aug-12
ADL 617573	GCX-020	Cedar Mountain Exploration (Alaska) Inc	K005S033W21	29-Aug-12
ADL 617582	GCX-035	Cedar Mountain Exploration (Alaska) Inc	K005S033W20	8-Sep-12
ADL 617578	GCX-028	Cedar Mountain Exploration (Alaska) Inc	K005S033W20	8-Sep-12
ADL 617574	GCX-021	Cedar Mountain Exploration (Alaska) Inc	K005S033W21	8-Sep-12
ADL 617583	GCX-036	Cedar Mountain Exploration (Alaska) Inc	K005S033W29	8-Sep-12

Table 5. Graphite Creek Property Federal Mining Claims.

Claim Number	Claim Status	Township	Area (Acres)	Claimant
AKFF 071308	Recorded	K 5S 34W 28 NW	31.36	Riffey Elizabeth
AKFF 071307	Recorded	K 5S 34W 28 NE	30.74	Riffey Elizabeth
AKFF 071306	Recorded	K 5S 34W 28 NE	34.15	Riffey Elizabeth
AKFF 045521	Recorded	K 5S 34W 28 NW	28.15	Jong Marc
AKFF 071305	Recorded	K 5S 34W 22 SW	32.94	Riffey Elizabeth
AKFF 045518	Recorded	K 5S 34W 21 SE	31.53	Jong Marc
AKFF 071304	Recorded	K 5S 34W 22 SE	29.95	Riffey Elizabeth
AKFF 071303	Recorded	K 5S 34W 23 SW	28.14	Riffey Elizabeth
AKFF 045519	Recorded	K 5S 34W 22 SW	29.75	Jong Marc
AKFF 045520	Recorded	K 5S 34W 22 SW	27.65	Jong Marc
AKFF 071359	Recorded	K 5S 34W 22 SE	26.32	Tweet William
AKFF 071360	Recorded	K 5S 34W 30 SW	29.53	Tweet William
AKFF 071314	Recorded	K 5S 34W 30 SW	30.16	Tweet William
AKFF 045517	Recorded	K 5S 34W 30 SW	29.28	Jong Marc
AKFF 071313	Recorded	K 5S 34W 30 SE	28.98	Tweet William
AKFF 045516	Recorded	K 5S 34W 30 SE	30.38	Jong Marc
AKFF 071312	Recorded	K 5S 34W 30 NE	30.29	Riffey Elizabeth
AKFF 045515	Recorded	K 5S 34W 30 NE	29.88	Jong Marc
AKFF 071311	Recorded	K 5S 34W 29 NW	29.34	Riffey Elizabeth
AKFF 045514	Recorded	K 5S 34W 29 NW	30.41	Jong Marc
AKFF 071310	Recorded	K 5S 34W 29 NE	29.81	Riffey Elizabeth
AKFF 045513	Recorded	K 5S 34W 29 NE	29.65	Jong Marc
AKFF 071309	Recorded	K 5S 34W 29 NE	29.04	Riffey Elizabeth
AKFF 045512	Recorded	K 5S 34W 29 NE	29.77	Jong Marc

2) During February 2012, Graphite One staked an additional 20 claims surrounding the Graphite Creek deposits, for which they own 100% mineral rights.

3) Also during February 2012, Graphite One acquired a 100% interest in 28 additional claims from a private individual for CDN $20,000 along with a 2% production royalty which can be purchased in the first three years for a payment of CDN $1,000,000.

4) During June 2012, Graphite One acquired an additional 17 claims representing the northeastern most portion of their Property, for which they own 100% mineral rights.

5) During September 2012, Graphite One acquired an additional 40 claims representing the east-southeastern most portion of their Property, for which they own 100% mineral rights.

Individual graphite showings are historically referenced by to their corresponding creek name. These include from west to east: Christophosen Creek; Hot Springs Creek; Trail Creek; Glacier Canyon Creek; Ruby Creek; and Graphite Creek (Figure 2). There is some confusion in the historical use of creek names in the eastern part of the Property. Several creeks including Ptarmigan (now referred to as Glacier Canyon), Ruby and Graphite creeks flow northwards from the Kigluaik Mountains into a main tributary, Glacier Canyon Creek, which then flows into Imuruk Basin at Windy Cove. The 'sub-creek' offshoots are not identified by name on USGS topographic maps. Rather their names come from a location map made by Coats (1944), one of the first to document the graphite showings.

5 Accessibility, Climate, Local Resources, Infrastructure and Physiography

5.1 Access, Local Resources, and Infrastructure

The Graphite Creek Property is located near the Seward Peninsula, Alaska. The closest major population center to the Property is the city of Nome, approximately 59 km to the south (Figure 1). The small village of Teller is located 42 km to the northwest.

The Nome-Teller road is about 30 km west of the Property, the seasonal road to Pilgrim Springs is about 32 km east, and the Nome-Kougarok road is about 20 km to the southeast. An old and now overgrown road (developed and used in the early 1900s) extends about 3 km from the shore of Windy Cove on the south side of Imuruk Basin to some of the historic showings. The Imuruk Basin is an intertidal water body with an outlet to Grantley Harbour on Seward Peninsula's west coast. Current access to the Property is either by foot traverse from either Windy Cove or the Cobblestone River, or by helicopter.

During summer 2012, crew members were based at the Salmon Lake Camp and airstrip, located approximately 50 km north-northeast of Nome, Alaska and approximately 22 km southeast of the Graphite Creek Property (Figures 1 and 3).

Employees were flown to Nome using Alaska Airlines, where the use of Graphite One owned trucks was employed to travel from Nome to the Salmon Lake Camp. There is currently no known road infrastructure to the Property. Daily access to the Property was achieved through an Astar helicopter operated by Prism Helicopters, based in British Columbia, Canada. There is no permanent infrastructure at the Property.

Within the state mining claims, surface rights are still owed by the state, although the mineral property owner may use the surface for activities necessary for mining. A number permits for mining operations will be required once the project progresses to mining stage, described herein. Based on the methods of extraction and on the extent of impacts, a Regional General Permit (“RGP”) 2006-1944 or an RGP 2007 or an Individual Permit will be required. An Alaska Pollutant Discharge Elimination System (“APDES”) Permit will be required if mining operations use or produce significant amounts of water. Additionally, a Dredge and Fill permit from the Corps will be required if mechanized equipment is used in the ocean, streams and wetlands.

Power for any potential advanced mining operation would have to be generated on site or drawn-out from the city of Nome, located approximately 59 km from the Property. Due to the current grassroots to intermediate stage of the project, full mining disclosure and the planning phase are not the primary focus of this report. With respect to mining personnel, Nome is historically a centre of placer and traditional hard rock mining. Consequently, experienced mining employees can be hired locally. As this is still a grassroots to intermediate exploration venture, water for drill testing comes from local sources such as creeks, streams and ponds. Drill fluid containment is done in accordance with the U.S. Environmental Protection Agency (“EPA”)’s Resource Conservation and Recovery Act (“RCRA”). While it is currently beyond the scope of this grassroots to intermediate scale project and this Technical Report, potential waste disposal areas and processing plant sites could utilize present and/or abandoned mining infrastructure associated with historical mining near Nome.

5.2 Climate and Physiography

The Property is in the south western part of the Seward Peninsula, approximately 59 km north of Nome, and 3 km inland from Windy Cove on the Imuruk Basin. The Imuruk Basin is a shallow intertidal basin that connects to the Bearing Sea at Grantley Harbor. A gently sloping alluvial plain extends inland from Windy Cove to the Kigluaik Mountains. Elevation at the Property varies from approximately 77 m in the alluvial plains and up to 1190 m in the mountains. The temporary Salmon Lake tent Camp was located 0.6 km from the edge of Salmon Lake, at an elevation of approximately 174 m. The camp was located in a gravel pit controlled by BLM and was completely removed at the end of the 2012 exploration campaign.

Vegetation on the Property is characterized by the arctic tundra biome, where vegetation is low and dominated by shrubs, sedges, perennial forbs, grasses mosses and lichens. Additionally, a layer of permafrost is present.

The operating season on the Property is approximately from mid-June to the beginning of September. From early June until mid-November the Bering Sea is typically ice free and the area of the Property is considered a maritime climate zone. The climate changes to continental in the winter, with drier and colder conditions. Average annual precipitation in Nome is 420.62 mm precipitation and 1,453 mm of snow. Average temperatures range from 15^{o}C to -19^{o}C

5.3 Pilgrim Hot Springs

The central Alaskan Hot Springs Belt, which includes the Pilgrim Hot Springs, is a vast stretch of low-temperature hydrothermal systems that have the potential to be a geothermal energy resource for remote communities in Alaska. The Pilgrim Hot Springs are located approximately 4 km north of the Kigluaik Mountains, and have a flow rate of 67 gallons per minute and water temperature averaging 68° C (maximum 88° C; USGS, 1971; Economides et al., 1983).

6 History

Historical excavations, prospects and occurrences of graphite and other mineral commodities for the area around Graphite One's Property is shown on Figure 3. The Graphite One Property represents the only area where graphite excavations occur in this region. Other known occurrences of graphite are located about 8 to 10 km southeast of the Graphite One Property (Windy Creek and Cobblestone River).

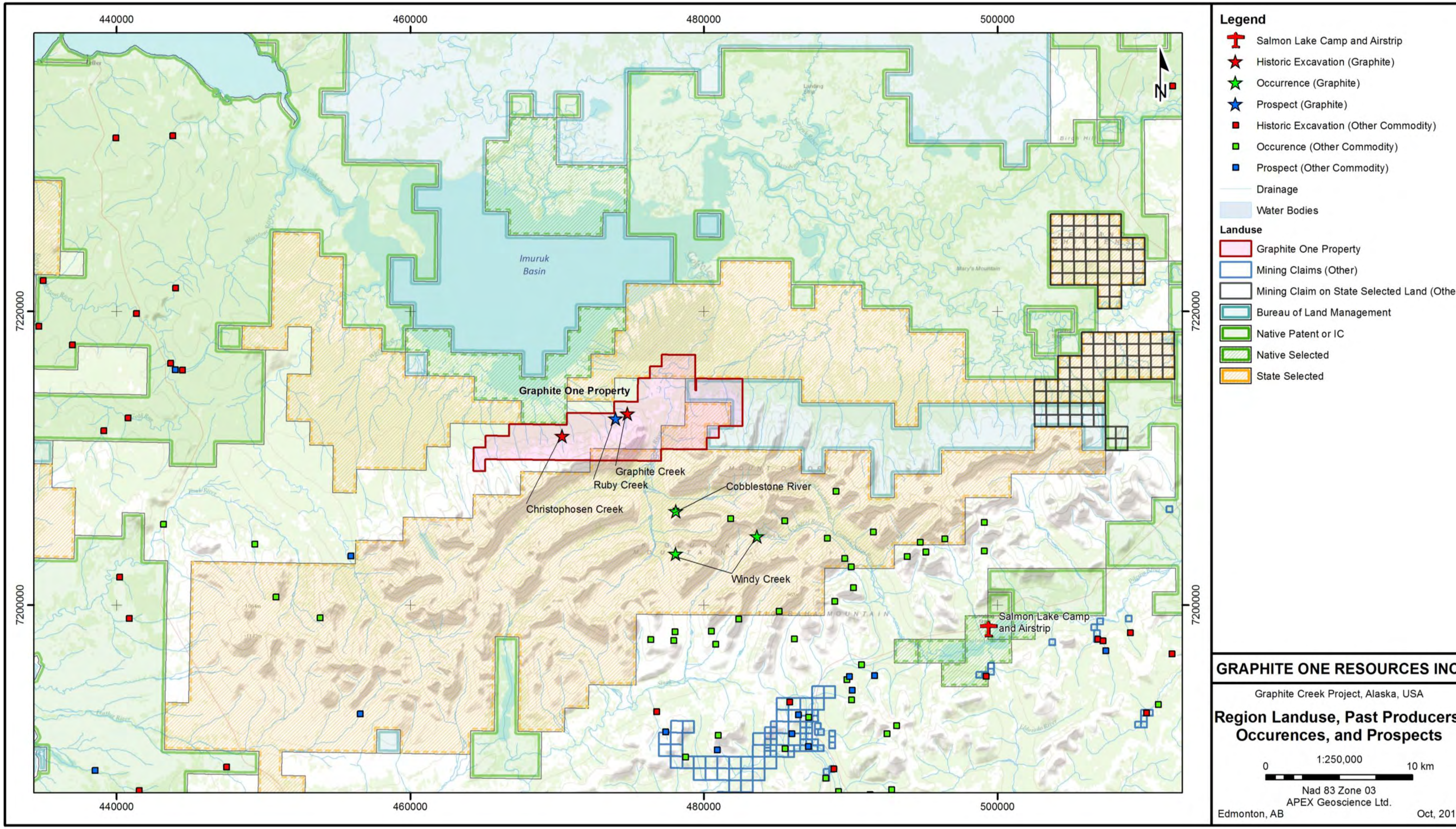
6.1 Discovery and Initial Documentation

Graphitic outcrops on the north side of the Kigluaik Mountains were documented in the early twentieth century (Moffit, 1913). During the 1900's-1910's, at least two mining companies explored the area. The first was the Uncle Sam Alaska Mining Syndicate, with claims in the Graphite Bay (now Windy Cove) area, 3.2 km south of tidewater and 4.8 km west of the Cobblestone River, along the foothills of the Kigluaik Mountains. The Uncle Sam Alaska Mining Syndicate's claims were staked in 1900 (Harrington, 1919). In 1912 the Uncle Sam Alaska Mining Syndicate made shipments totalling 130 tons of graphite and in 1916 had 300 tons stockpiled ready for shipping (Mertie, 1918).

The Alaska Graphite Mining Co. staked claims in 1905, and added additional claims in 1915 and 1916 (Mertie, 1918; Harrington, 1919). A total of 35 tons of graphite was mined from talus in 1907 (Coats, 1944). Employing about seven people, 100 tons of graphite was mined in 1916 (Mertie, 1918). This production was hauled a short distance overland to Windy Cove on the shore of the Imuruk Basin, from there to Teller by boat, and then shipped to Seattle and San Francisco in 1917, along with several tons mined from an open cut (Harrington, 1919).

After initial early 1900's production, the properties lay dormant until 1943 when USGS geologist Robert Coats visited the area. His field crew sampled material from several sorted piles of previously mined graphite, and from several high grade graphitic lenses on the Property (Coats, 1944). Three specific areas that received early surface excavation work were named by Coats: Christophosen Creek, Ruby Creek, and Graphite Creek (see Figure 2). Coats (1944) measured exposed high-grade lenses in these three areas and reported that individual high-grade lenses vary from a few centimetres to a metre in thickness and commonly have lengths that are 10 to 15

Figure 3. Historical workings and occurrences in the Graphite One Resource Inc. Graphite Creek Property. Also shown, are claims belonging to other companies in the region.



times their width. The high-grade samples from these lenses contained up to 59.7% graphite. The USGS continued to describe the deposits in the 1970's to 1990's (e.g., Sainsbury, 1972; Cobb, 1972, 1975; Weiss, 1973; Hudson and Plafker, 1978; Hudson, 1981, 1998; Swainbank et al., 1995). The last known exploration interest in the area was in 1981 when a brief field examination of the showings was conducted by the Anaconda Copper Company when several samples were taken for analysis during the one day visit (Hudson, 1981; Wolgemuth, 1982).

6.2 Documentation of Historical Graphite Showings

The graphite showings within the boundaries of Graphite One Resources Inc. Property are known to crop out in incised creek valleys on the north side of the Kigluaik Mountains and it is from these exposures that the graphite showings have been described by various authors (e.g., Mertie, 1918; Coats, 1944; Cobb and Sainsbury, 1972; Sainsbury, 1972; Cobb, 1975; Adler and Bundtzen, 2011; Nelson, 2011). From west to east these creek exposures include Christophosen Creek, Hot Springs Creek, Trail Creek, Glacier Canyon Creek, Ruby Creek and Graphite Creek. A general historical overview of each of the showings is described in the text below.

6.2.1 Christophosen Creek

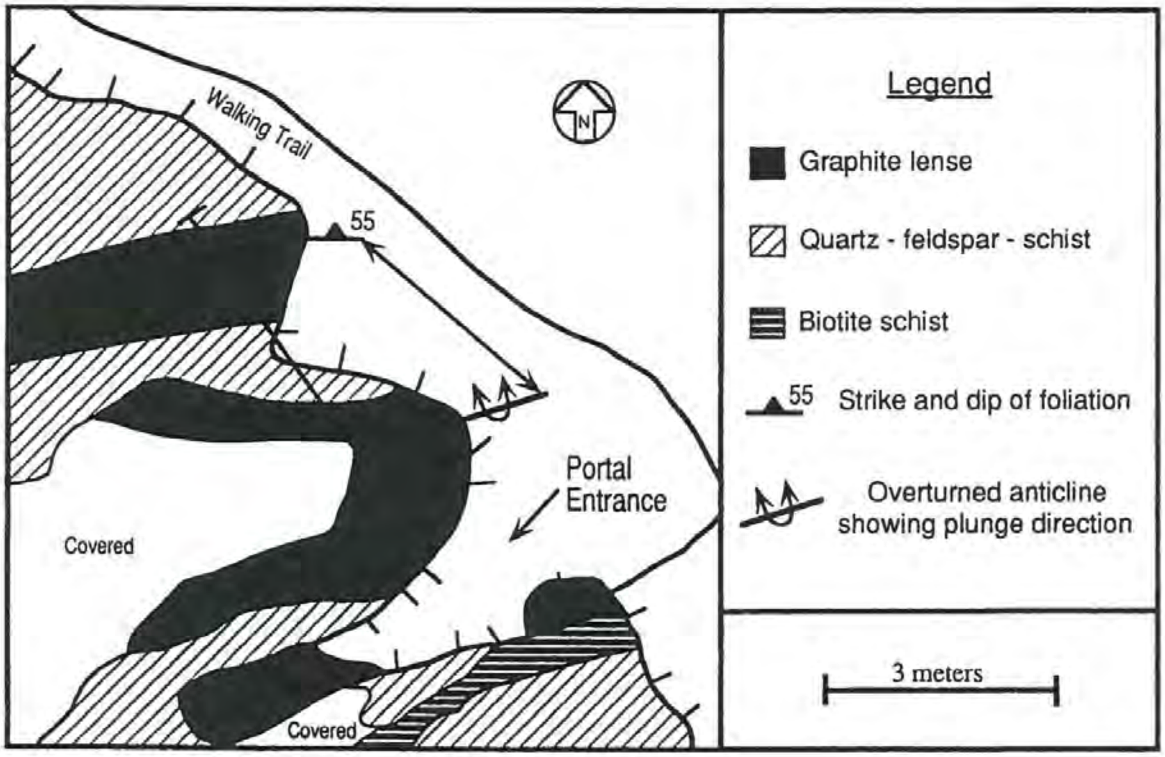
The graphite showing at Christophosen Creek is 2.8 km southeast of the mouth of the creek. Most of the exploration and excavation work at Christophosen Creek took place between 1912 and 1917 (Cobb, 1975).

The graphite-bearing zones at Christophosen Creek are hosted in discontinuous and often folded schistose rocks. The schist is intruded locally by small granitic plugs, dykes and sills. The graphite-bearing schist strikes approximately parallel to the Kigluaik Fault zone (250º azimuth) and generally dips northwards at 75º. The graphite-bearing schist make up two general sequences: 1) a heterogeneous sequence of sillimanite-garnet -biotite-quartz schist with disseminated graphite and graphite-rich lenses; and 2) pervasive biotite-quartz schist with disseminated graphite and pyrrhotite that commonly weathers an orangey ochre colour.

Historically, exploration in the Christophosen Creek area has generally been by small prospect cuts exposing near-surface graphite. There are two short adits ("adit" in this report refers to small <10 m excavations into exposed outcrop) on the southwest side of Christophosen Creek (Adler and Bundtzen, 2011); a caved adit situated on an open ridge, and an open adit approximately 90 m southeast of the caved adit.

Samples taken at the adit show a true graphite-bearing unit width of 2.6 m (Figure 4). The graphite schist dips toward the valley at an angle slightly steeper than the slope of the hillside and has a carbon content of up to 19.5% (Adler and Bundtzen, 2011). Approximately 130 tons (132.1 tonnes) of hand-sorted high-grade material was reportedly shipped from this locale in 1916 (Mertie, 1918) and other small shipments of similar material may have occurred. Based on field observations, Adler and Bundtzen (2011) reported that one or more graphite horizons 1.5 to 3 m wide and may extend west from Chistophosen Creek for up to 900 m. The graphite flakes are commonly 0.01-

Figure 4. Geological sketch of Christophosen graphite showing (Alder and Bundtzen, 2011).



0.1 cm in diameter, although some flakes are greater than 0.3 cm in their longest dimension (Coats, 1944).

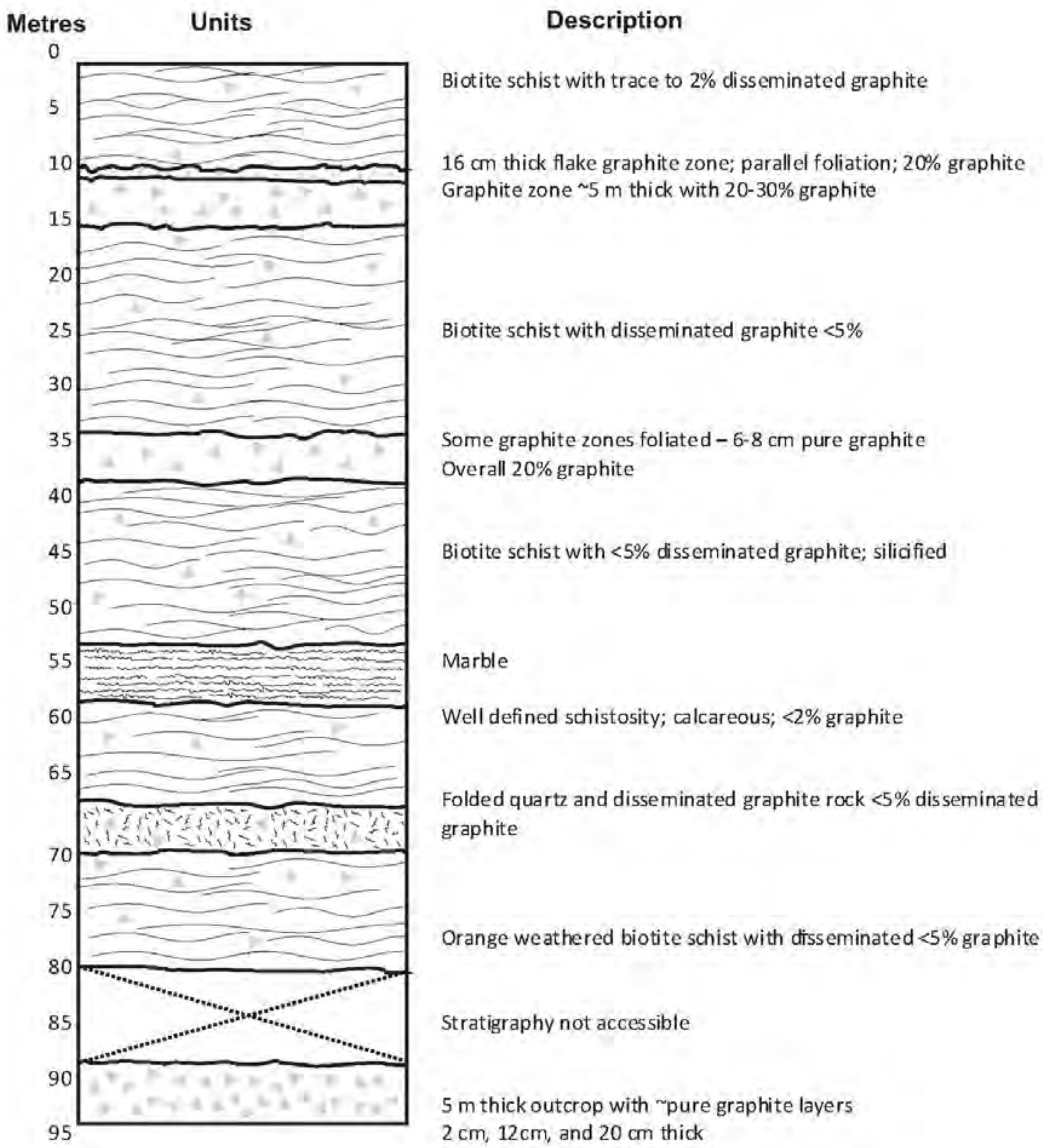
6.2.2 Hot Springs Creek

Historical accounts of Hot Springs Creek are not currently known to the author. However, a geological cross section measured by Nelson (2011) shows that graphite lenses and disseminations occur within biotite schist (Figure 5). A 16 cm lens of graphite and a graphitic zone with 20-30% Carbon was mapped in the uppermost part of the section.

6.2.3 Trail Creek

Historical accounts of Trail Creek are not currently known to the author. However, a rough (i.e., non-measured) section by Nelson (2011) reported that the lower, northern portion of Trail Creek is composed from north to south (or upstream/upslope) of: a 25 cm thick graphite-rich layer occurs at the base; followed by thick 120 m package of sillimanite-garnet-biotite-quartz schist with local granitic sills and disseminated (1-5%) graphite; followed by a thick 100 m section of ochre-weathering biotite-quartz schist with minor (2-5%) disseminated graphite; and topped by garnet-bearing schist with millimeter-scaled layers/lenses of graphite.

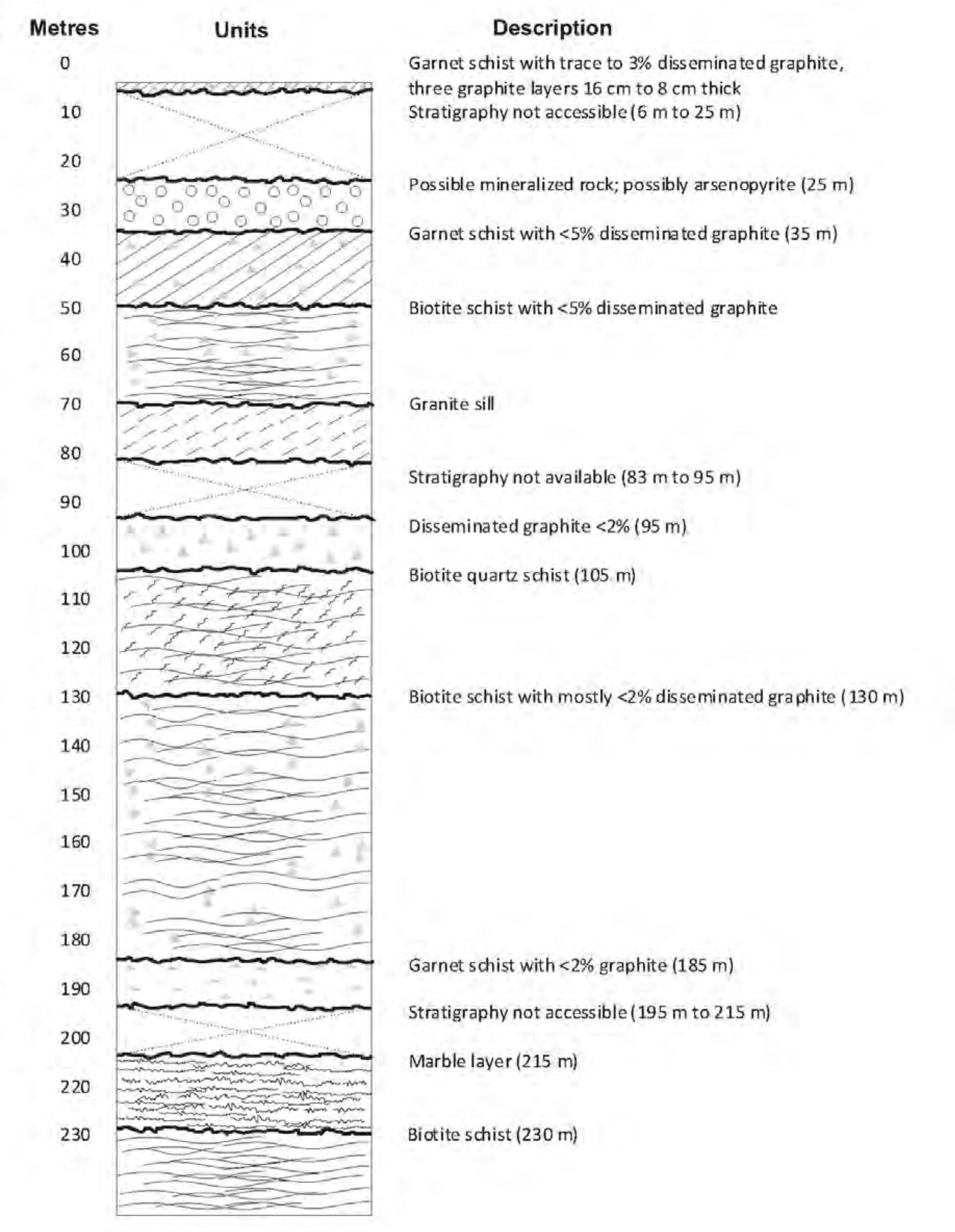
Figure 5. Measured section at Hot Springs Creek (Nelson, 2011).



6.2.4 Glacier Canyon Creek

The historical account of graphite at Glacier Canyon Creek is confusing. That is, it appears Glacier Canyon Creek has undergone name changes through time and some authors (e.g., Adler and Bundtzen, 2011) have apparently documented Glacier Canyon Creek when it has been elsewhere described as Graphite Creek. The problem with the creek nomenclature is that several tributaries flow into one main drainage pattern. Individual tributaries in the eastern part of the Property originating from the Kigluaik Mountains include from east to west Ptarmigan (now known as Glacier Canyon Creek), Ruby and Graphite Creek. The creeks all flow into a main tributary that is technically Glacier Canyon Creek. A recent measured section of Glacier Canyon Creek is presented in Figure 6 (Nelson, 2011). It shows that largely disseminated graphite (<2% to <5%) occur in garnet and biotite schist. At the top of the section, three graphite layers 8 to 16 cm thick were documented. Possible arsenopyrite was also observed.

Figure 6. Measured section at Glacier Canyon Creek (Nelson, 2011).

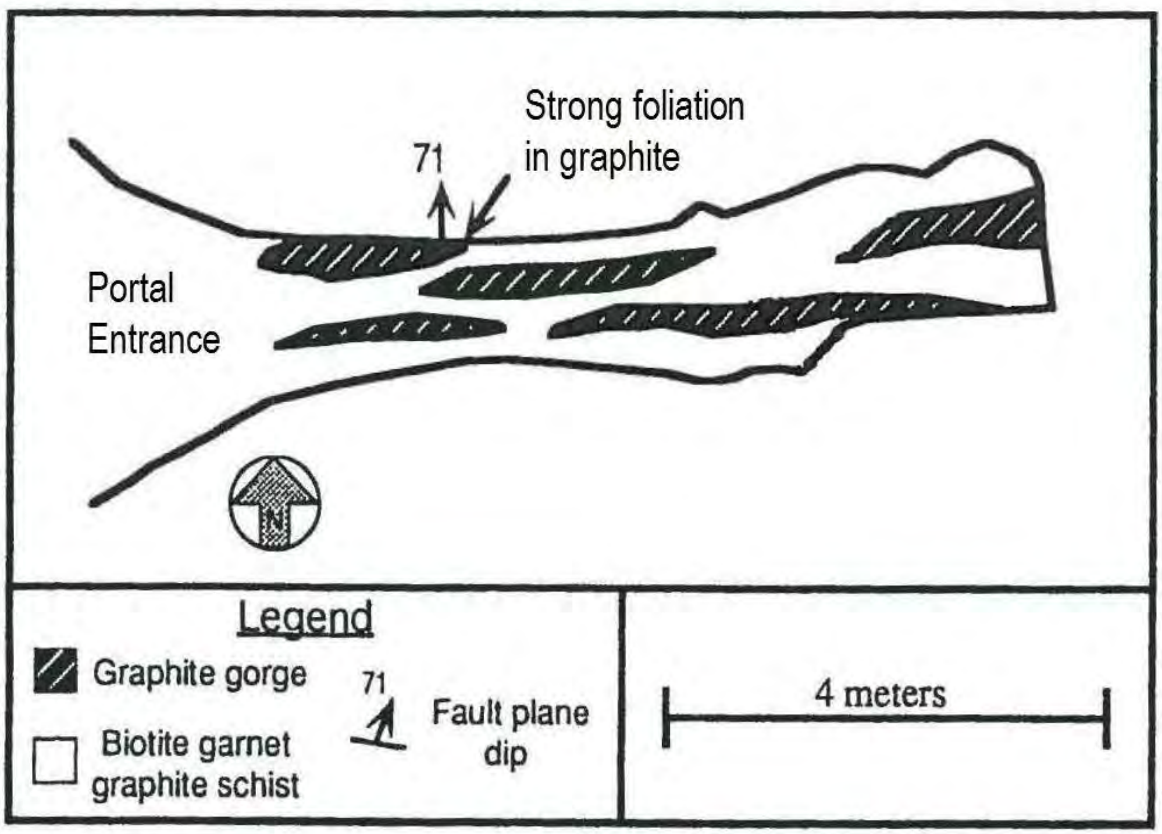


6.2.5 Ruby Creek

Along the Kigluaik Fault, Ruby Creek occurs approximately 900 m west of Graphite Creek. Graphite was historically produced from a number of short adits and cuts at a similar documented distance that must represent Ruby Creek. Here a 1.6 m wide graphite-bearing schist zone is exposed in an open adit. Figure 7 shows that the graphite zone comprises a number of lenses of massive(?) graphite. The lenses reportedly strike N88^{o}E and yield up to 23% carbon (Adler and Bundtzen, 2011). Within the adit, a small (15 cm) fault strand strikes N60^{o}E and dips approximately 36º southeast; it should be noted that Adler and Bundtzen, (2011) show a fault dip of 71^{o} to the north on their figure number 12 (see Figure 7).

A second graphite zone was reported to occur about 90 m upstream by Adler and Bundtzen (2011), who were unable to examine the bedrock due to snow cover. These authors also noted that the Ruby Creek adit may occur within the same zone that hosts the "Tweet" pit at Glacier Canyon Creek (*sic:* Graphite Creek).

Figure 7. Geologic sketch of prospect adit on Ruby Creek graphite showing (Alder and Bundtzen, 2011).



6.2.6 Graphite Creek

Graphite Creek was not shown by Cobb and Sainsbury (1972), but Cobb (1975) summarized relevant references under the name 'Graphite Creek'. Authors such as Adler and Bundtzen (2011) appear to have reported the “Tweet” pit and Graphite Creek geology as ‘Glacier Canyon Creek’.

Directly west of Graphite Creek, a 9 m long pit represents the historical workings of Alaska Graphite Co. and N.B. Tweet (the “Tweet” pit). The pit occurs at the mouth of Glacier Canyon at an elevation of approximately 45 m above the creek. The 9 m long pit exposes garnet-bearing schist with disseminated graphite and graphite-rich lenses. A section here contained 0.9 m of garnet-bearing schist with graphite and a 1.1 m thick high-grade graphite lens with quartz stringers. A sample of the garnet-bearing schist contained 12% graphite of which 80% was coarser than 30 mesh per inch and a sample of the graphite-rich material contained 59% graphite of which 83% was coarser than 30 mesh per inch (Coats, 1944). Adler and Bundtzen (2011) reported locally massive graphite-garnet-schist at the Tweet pit contained up to 46% carbon. Fifty tons (50.8 tonnes) of graphite were shipped from this pit in 1916 (Adler and Bundtzen, 2011).

The Graphite Creek showing includes several other graphite-rich showings (i.e., other than the Tweet pit). A wide graphitic zone comprising two distinct graphite-bearing zones (15 m and 11 m wide) were reported to occur along the west wall of Graphite Creek about 90 m south of the Tweet pit (Adler and Bundtzen, 2011). A 7.6 m thick zone containing disseminated graphite and a 0.9 m wide high-grade lens is exposed on the east side of Graphite Creek. A 6.1 m section at this eastern locale is estimated to contain 10% disseminated graphite (Coats, 1944). This zone has been traced eastward on the surface for a distance of 145 m and is characterized by a 0.9-1.2 m wide high-grade lens where it is well exposed (Coats, 1944). Adler and Bundtzen (2011) include carbon analysis from the “east side” and “west wall” exposures adjacent to the Tweet pit; the samples range between 2% and 64% carbon. While the analyses are interesting, there are sample location discrepancies between their figures and their analytical table that render the author unable to make any significant remarks on these data.

7 Geological Setting and Mineralization

7.1 Regional Geology

The Kigluaik Group consists of amphibolite and granulite facies metamorphic rocks and is therefore divided into two sub-groups, an upper and lower assemblage. Ampibolite grade upper Kigluaik Group schist is exposed on the southern flanks of the Kigluaik mountain range. Pelitic gneiss samples from the upper section of the Kigluaik group have been dated using Rb/Sr to ~735 Ma (Bunker et al., 1979). The basal Kigluaik Group contains granulite grade schist and gneiss, and is exposed on north flank of the mountains (Figures 8 and 9). These rocks have no direct counterparts in the adjacent mountain ranges and are believed to represent the deepest crustal rocks exposed in northwestern Alaska (Miller, 1994). The lower Kigluaik Group comprises coarse marble, quartzo-feldspathic gneiss, schist and gneiss of mafic and ultramafic composition, graphite rich schist, and garnet lherzolite.

Figure 8. Regional geology of Graphite One Resources Inc. Graphite Creek Property.

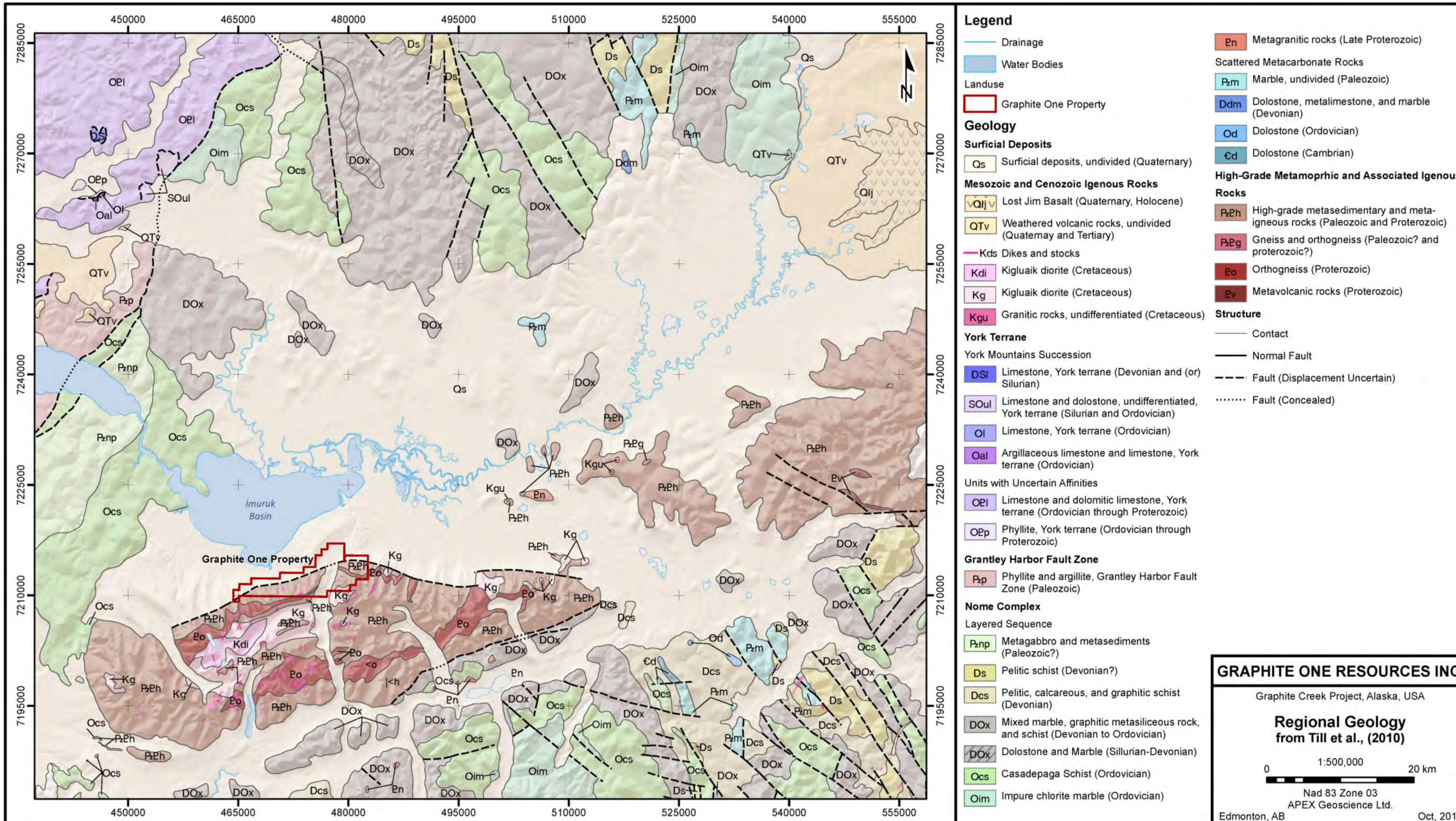
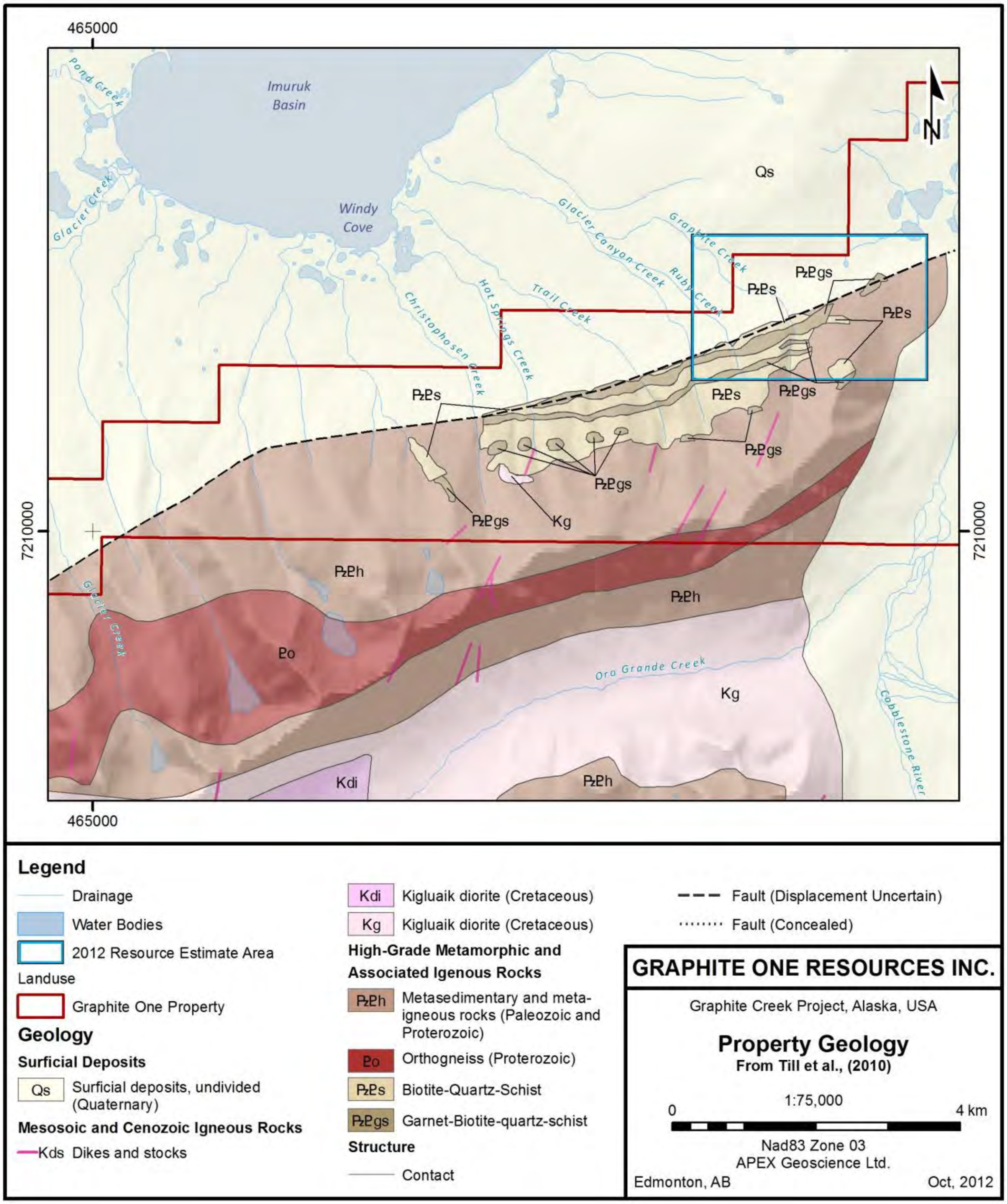


Figure 9. Historical detailed geology of Graphite One Resources Inc. Graphite Creek Property. An updated geological map of the Maiden Resource Estimate area is presented in Figure 10 of this Technical Report.



The Graphite One Property area is underlain by high-grade metamorphic rocks of the Kigluaik Group (Figures 8 and 9). These metamorphic rocks are composed of continental crustal material of Proterozoic to middle Paleozoic age that were subjected to crustal imbrication and thickening in middle Mesozoic time and widespread plutonic activity in mid-Cretaceous to Late Cretaceous time (Sainsbury, 1972, 1975; Bunker et al., 1979; Miller, 1994; Till and Dumoulin, 1994; Armstrong et al., 1986; Amato and Wright, 1998; Till et al., 2011). However, some authors have proposed that at least part, and perhaps a significant part, of high-grade metasedimentary and metaigneous rocks of the Kigluaik Group (unit PzPh on Figure 8) was originally blueschist-facies rocks of the Nome Complex subsequent to a high-grade metamorphic overprinting (Hannula and McWilliams, 1995; Till et al., 2011).

All of the formations of the Kigluaik Group are cut by intrusive rocks, the most common of which is granite. These intrusions are more abundant in the lower part of the group. Besides granite intrusions, dykes and sills of diorite, diabase and pegmatite are present.

Peak metamorphic grade in the area is thought to have occurred in the Cretaceous (91 Ma), immediately preceding or coincident with the intrusion of the Kigluaik Pluton (Amato and Wright, 1998). Other dating methods have yielded younger ages. $^{40}K/^{40}Ar$ and $^{40}Ar/^{39}Ar$ dating have yielded ages of ~95-81 Ma. The younger ages likely dates the onset of high grade regional metamorphism of the Kigluaik Group (Adler and Bundtzen, 2011).

Surficial Quaternary deposits dominate the area to the north of the Graphite One Property (Figure 8). The surficial deposits include: glacially deposited sand, gravel, and boulders; fluvial gravel and sand; marine and fluvial terrace deposits; and wetlands (Till et al., 2011).

7.2 Property Geology

The graphite showings are generally located on the north side of the Kigluaik Mountains (at about 230 m elevation; Figure 8). More specifically, they occur on the upslope and in the footwall, of the surface trace of the reactivated Kigluaik normal fault. The Kigluaik Fault generally strikes approximately 250º azimuth and dips 75º to the north over a distance of approximately 35 km. Contemporary movement on this fault has uplifted the rugged and youthful Kigluaik Mountains to the south and down thrown the lowlands of the Imuruk Basin to the north (Hudson and Plafker, 1978).

Graphite occurs as high-grade tabular lenses and disseminations within amphibolite facies metasedimentary rocks, primarily biotite-quartz schist with zones of sillimanite-garnet-biotite-quartz schist (Figure 9; Sainsbury, 1972). The enriched graphite segregations (lenses and streaks) are reportedly restricted to an area within one km of the fault zone (Adler and Bundtzen, 2011). Based on their apparent association with the Kigluaik Fault, the graphite-bearing schist strike subparallel to the mountain front and dips north between 40^o and 75^o.

7.2.1 Property Geology: Observations during a 2012 Site Visit

During a May 2012 field visit, R. Eccles visited graphitic bedrock exposures at Trail and Graphite creeks within the Graphite One Resources Inc. Property boundary. At Trail Creek, an exposed section of ochre-weathering bedrock is comprised of graphite-bearing sillimanite-garnet-biotite-quartz schist that dips northwards at high angles (68º to 75º). Graphite is readily visible in this rock unit as segregations (lenses and streaks) of principally massive graphite. Slickensides occur on some graphite surfaces suggesting post-graphite formation frictional movement associated with reactivation and/or slumping along the Kigluaik Fault.

Five graphite-rich samples were collected at Trail Creek from both loose float and in-place bedrock materials (Table 6). Approximately 15-20 m southward, up the creek slope and away from the Kigluaik Fault zone, the bedrock at Trail Creek is characterized by biotite-quartz schist and sillimanite-biotite-quartz schist with sillimanite crystals up to 1 cm in length. Disseminated graphite (up to 15%) occurs locally in specific layers and disseminations—rather than graphite lenses—seem to be particularly associated with the biotite-quartz schist. Laboratory results, from Activation Laboratories Ltd. located in Ancaster, Ontario, yield total carbon values at this particular section of Trail Creek of between 3% and 40% (Table 6). The highest graphite grades (33% and 40%) were from in-place bedrock (i.e., not talus or historically sorted graphite production piles).

The Graphite Creek site offers excellent exposure of the Kigluaik Fault. The hanging-wall side of the fault comprises significantly lower metamorphic grade rocks in comparison to the footwall graphite-bearing amphibolite-grade rocks and is composed of quartz grains with biotite books, light pink garnet and no visible graphite. One sample was taken of this unit (Table 6). Adjacent to the fault, the footwall comprises massively segregated and disseminated graphite in sillimanite-garnet-biotite-quartz schist. In places, the massive graphite takes on a 'slag-like' appearance (i.e., vitreous mass left as a residue by the smelting of metallic ore).

Massive segregated graphite 'cobbles' from Graphite Creek yielded 41% carbon (Table 6). Further south and upslope at Graphite Creek, the rock type is dominated by ochre-weathering biotite-quartz schist. This unit is fairly extensive and in preliminary reconnaissance variable proportions of disseminated graphite were observed. Some layers within the biotite-quartz schist unit contain abundant brownish-pink garnet porphyroblasts that are up to 1.3 cm in diameter. From a brief north to south walk through the biotite-quartz schist unit, graphite seems to diminish further upslope (south) from the fault zone.

7.2.2 Property Geology: Observations during 2012 Fieldwork

More comprehensive details of the 2012 fieldwork are included in the 'Exploration Section', however, it is important to point out that new 2012 geological mapping confirmed historical observations of distinct geological layers comprising high-grade massive segregated and disseminated graphite in sillimanite-garnet-biotite-quartz schist and disseminated graphite in biotite-quartz schist (±garnet). Based on strike/dip measurements, the layers consistently dip northwards such that these layers appear to represent continuous geological units and are not overly distorted by complex regional

Table 6. Analytical results from R. Eccles May 2012 field visit to the property.

Sample ID	Showing (Creek)	General grab sample description	C-total (%) [1]
12RER-GP001	Trail Creek	Talus with a high concentation of graphite segregations	4.26
12RER-GP002	Trail Creek	Talus; 'selected' fragments characterized by slag-like segregations of massive graphite	22.8
12RER-GP003	Trail Creek	Garnet-sillimanite-biotite-quartz schist with highly segregated graphite (lenses and streaks)	40.1
12RER-GP004	Trail Creek	Ochre-stained biotite-quartz schist with highly segregated graphite (lenses and streaks)	33.3
12RER-GP005	Trail Creek	Finely disseminated graphite (~10-15%) in biotite schist	3.16
12RER-GP006	Trail Creek	Disseminated graphite (~15%) in biotite schist	9.26
12RER-GP007	Trail Creek	Sillimanite-biotite schist; silliminate blades up to 1 cm long; no visible graphite	0.07
12RER-GP008	Graphite Creek	Hangingwall quartz-biotite books-light pink garnet with no visible graphite; significantly lower metamorphic grade than the footwall schist	0.77
12RER-GP009	Graphite Creek	Footwall garnet-biotite-quartz schist with segregatons of massive graphite schist	41.4
12RER-GP010	Graphite Creek	Ochre-stained biotite-quartz schist with highly segregated graphite (lenses and streaks)	24.8
12RER-GP011	Graphite Creek	Pophyroblastic garnet schist	0.09
12RER-GP012	Graphite Creek	Ochre-stained biotite-quartz schist with disseminated (<10%) graphite or mica?	2.23

[1] Detection limit 0.01%; Analytical method infrared analysis
Laboratory certificates (Appendix 2).

or large-scale fold belts. Small localized folding does exist on the <1 m scale, but it is more or less confined within the high-grade graphite schist layers.

A total of 591 rock grab samples were sampled throughout the Graphite Creek Property during 2012 fieldwork. Rock sample types include graphitic sillimanite-garnet-biotite-quartz and biotite-quartz (±garnet) schistose units plus localized intrusive diorite. All samples were analyzed for specific gravity and graphitic carbon. Of the 591 samples, 11 samples yielded >45% Cg (up to 80.9% Cg), 47 samples had >10% Cg and 137 samples had >3% Cg.

A 1,523.5 line-kilometre time-domain, helicopter-borne magnetic and electromagnetic survey over the Graphite One Property shows that bands of continuous high-electromagnetic anomalies mimic historical and 2012 geological mapping of high-grade graphitic sillimanite-garnet-biotite-quartz schist in the Graphite Creek Property area. The high-electromagnetic bands also correlate well with high-carbon geochemical samples collected in 2011 and 2012. Subsequently, interpretation of the electromagnetic data provides preliminary evidence that the high-grade graphite layers observed in incised creek exposures are continuous along strike in a north-easterly direction for approximately 18 km.

7.3 Mineralization

There are two distinctive graphite-bearing schist intervals along the north flank of the central Kigluaik Mountains. The first is sillimanite-garnet-biotite-quartz schist that contains coarse graphite-rich segretations and disseminated graphite (Figure 9). The other is biotite-quartz schist that characteristically has a few percent of disseminated graphite.

The sillimanite-garnet-biotite-quartz schist, the principal host to higher grade graphite lenses, makes up two distinctive layers in the metasedimentary sequence along the north flank of the Kigluaik Mountains. A third potential horizon is defined by ‘pods’ of sillimanite-garnet-biotite-quartz schist (Figure 9). The position of these layers is most likely structurally controlled; that is a folded unit with the third pod-like layer forming in this style as uppermost erosional features (T. Hudson, personal communication, 2012). Hence, shallow-dipping erosional remnants of the southern-most third layer makes up a few discontinuous perched masses at higher elevations. The sillimanite-garnet-biotite-quartz schist layers strike slightly oblique to the mountain front and dip northwards at 40° to 78°. Historical and 2011 mapping indicate that the sillimanite-garnet-biotite-quartz schist thickness could be up to 100 m.

The sillimanite-garnet-biotite-quartz schist typically is fine to coarse grained, weathers grey, has a wavy and crenulated schistosity, garnet porphyroblasts (up to 2 cm across), and augen-shaped quartz grains. Discontinuous segregations (lenses and streaks) of coarse high-grade graphite, from centimeters to a few meters thick, are common. These high-grade graphite lenses in the sillimanite-garnet-biotite-quartz-schist have up to 60% coarse, crystalline graphite and were no doubt the sources of hand-sorted graphite produced in the early 1900’s. Disseminated flakes of graphite, up to 1 mm or more across, make up several percent of the rock.

The biotite-quartz schist is fine-grained and weathers a rusty ochre colour. It characteristically has regular layering with individual layers commonly 3 to 10 cm thick. Graphite occurs as disseminated flakes up to about 1 mm across and can make up several percent of the rock. Higher grade graphite-rich layers, varying from 3 to 25 cm in width are present, but are not as common as in the sillimanite-garnet-biotite-quartz schist.

7.4 Graphite Flake Characteristics

Natural graphite, in general, is divided into three classes: disseminated flake, crystalline vein (fibrous or columnar) and amorphous (microcrystalline particles). Flake graphite is a lamellar form with each flake having crystallized as such in the rock. The size of the graphite flake is an important commercial consideration. While it is possible to manufacture small flake from large flake graphite, the converse is not true. Therefore, it is in the best interest of any potential graphite producer to maximize the amount of large flake within the deposit.

An Anaconda Minerals Company internal memorandum reported that high grade (average 60% carbon) samples from the Graphite Creek Property contain high purity (+95% C) graphite with approximately 90% of the flakes being larger than 50 mesh (Wolfe, 1982). Most recent screening results are presented in detail in the 'Exploration' section.

8 Deposit Types

Graphite deposits of commercial interest occur widely in regionally or thermally metamorphosed sedimentary rocks, and in hydrothermal and metasomatic deposits. Harben and Kužvart (1996) identified five deposit types:

1) Deposits formed by concentration and crystallization of carbon (from coal or carbonaceous sedimentary rocks) during regional or contact metamorphism (Cameron and Weiss, 1960; Graffin, 1975; Krauss et al., 1988; Sutphin et al., 1991; Weiss, 1973; Weiss and Salas, 1978);

2) Vein deposits, where graphite is thought to form epigenetically from carbon-rich hydrothermal or pneumatolytic solutions as interlocking aggregates of coarse graphite crystals in veins containing 75-100% carbon (Cameron and Weiss, 1960; Harben and Bates, 1984; Krauss et al., 1988; Rumble et al., 1986; Sutphin et al., 1991; Weiss, 1973);

3) Contact metasomatic (skarn) deposits resulting from a concentration of pre-existing carbon in sediments (Bugge, 1978) that could include calc-silicate hornfelses or reaction skarns (Evans, 1993);

4) Residual Deposits that may be concentrated in deposits formed through weathering/leaching of graphitic gneisses and schists because of the unreactive nature of graphite (Dill, 2009; Murdoch, 1967; Fogg and Boyle, 1987); and

5) Early magmatic deposits (rare) such as peraluminous dacites and gabbros (Tsuchiya et al., 1991; Kanaris-Sotiriou, 1997), alkaline pegmatites (Jaszczak et al., 2007; Satish-Kumar and Santosh, 1998).

Most economic deposits of graphite occur as flake graphite in high-grade metamorphic rock (i.e., granulite facies) forming under pressures of 1 GPa and 750º C. Disseminated flake graphite deposits develop syngenetically from carbonaceous material in sedimentary rocks that have been subjected to garnet grade or higher regional metamorphism (Cameron and Weiss, 1960; Harben and Bates, 1984; Krauss et al., 1988; Sutphin et al., 1991). Since graphite is a form of carbon, and all carbon oxidizes at high temperature, graphite must have a reducing environment in order to be stable at high temperature.

Flake graphite deposits may be any age, but are commonly Archean to late Proterozoic in age. Host rocks typically consist of metasedimentary rocks such as quartz-mica schist, gneiss, micaceous quartzite, micaceousfeldspathic quartzite, and marble. Associated rocks are pegmatites, aplites, and granite intrusives. Gangue mineralogy may include quartz, calcite, biotite, muscovite, feldspars, garnet, and sometimes amphibole, pyrrhotite, pyrite, and magnetite. A typical rock type where flake graphite may be found is sulphidic biotite-quarz-feldspar gneiss; such is the rock type of the Mesoproterozoic graphite deposits in the Highlands region of New Jersey, USA (Volkert et al., 2000).

Deposits are usually stratabound and consist of individual beds or lenses in gneiss, schist, and marble that are richer in graphite than associated beds. Deposits are typically up to 35 m thick and several kilometres or more long. Concurrent, intense large-scale folding of the metasedimentary sequences is common and graphite deposits commonly occur on the limbs of such folds. Deposits tend to occur in metamorphosed continental margin or intercratonic basinal sediments. Regional depositional environments include regional metamorphism and large-scale deformation of carbon-rich sedimentary sequences. Rarely, graphite veins may be associated with disseminated flake graphite deposits.

Most of the world's production of flake graphite comes from deposits of disseminated graphite in areas characterized by regionally metamorphosed rocks. Large deposits of flake graphite are known and/or have been mined in the United States, Central America, South America, Canada, Africa, India, Germany, Ukraine, Russia, Madagascar and China. Small, localized deposits of flake or flake-like graphite are known from literally hundreds of other localities. Mined flake graphite deposits commonly have grades of 10% to 12% graphite. Mexico and South Korea are significant sources of amorphous, or microcrystalline, graphite. Sri Lanka is home to the largest known deposits of crystalline vein graphite. Contact metasomatic or hydrothermal graphite deposits were mined in Canada and the United States, but these deposits are generally small and of relatively low grade.

9 Exploration

This section summarizes 2011 preliminary field observations, 2012 field visits by the authors of this Technical Report and a major 2012 exploration program. Total 2011 and 2012 expenditures exceed CDN$4,800,000 (Appendix 1).

9.1 Geological Mapping

9.1.1 2011 Field Observations

Historically the graphite bearing rocks on the Graphite Creek Property have been studied and documented by looking at outcrops containing high grade lenses; these same lenses were the focus of early 1900's exploration and production. The historical mapping, sampling and production were previously described in the 'History' and 'Property Geology' sections.

During July 1-8 2011, a small helicopter supported field program at the Graphite Creek Property was conducted on behalf of Graphite One (then Cedar Mountain). As part of the 2011 field work, Mr. S. Nelson identified and mapped the distribution of the graphite-rich meta-sedimentary rocks along the north-central flank of the Kigluaik Mountains (Nelson, 2011). Field observations reported that:

- The graphite host rocks are continuous over a strike length of approximately 5 km along the northern front of the Kigluaik Mountains;
- Measured sections show that the host package is commonly over 100 m thick;
- The biotite-quartz schist contains 2 to 6% disseminated graphite;
- The sillimanite-garnet-biotite-quartz schist hosts high grade graphite lenses that average 55% to 60% graphite with disseminated and graphite segregations that can contain 8% or more graphite over widths of at least 16 m;
- The sillimanite-garnet-biotite-quartz schist hosts the highest concentrations of crystalline flake graphite and the northern-most layer, closest to the mountain front, is the priority exploration target in the prospect area.

9.1.2 2012 Geological Mapping

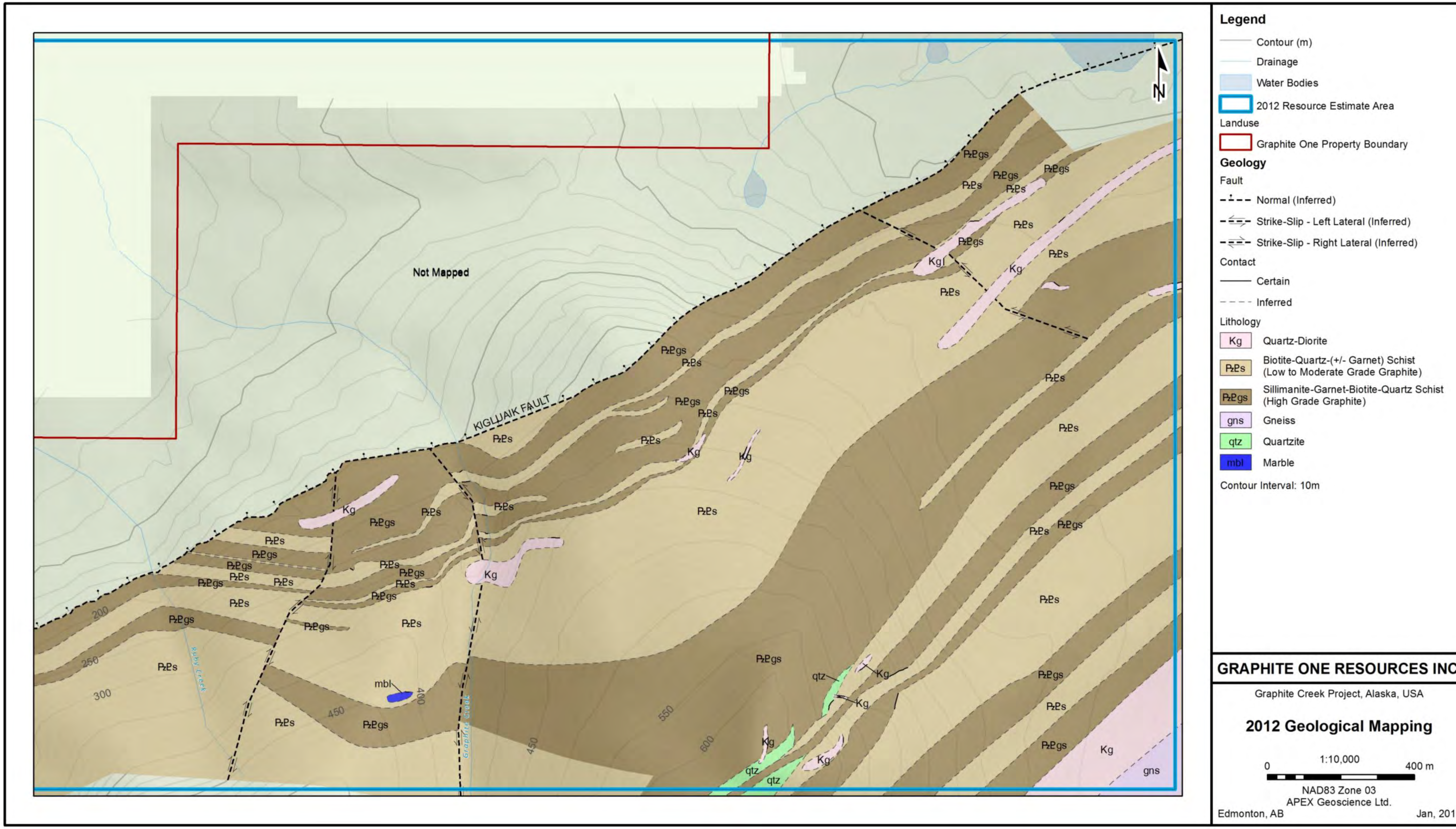
On behalf of Graphite One, APEX personnel undertook a major mapping initiative during the summer 2012. The objective was to map the northern portion of the Kigluaik Mountains immediately south of the major Kigluaik Fault within the Property boundary. Reconnaissance mapping was conducted over the pre-existing occurrences at Christophosen Creek, Hot Springs Creek, Ruby Creek, and Graphite Creek. The mapping program covered a total area of 33 km^2 encompassing approximately 50% of Graphite One's total land position. However, this section focuses only on the resource estimate area (Figure 10).

Detailed 1:5,000 scale geological mapping was conducted from June 16, 2012 to August 25, 2012. Helicopter transportation was used to transport APEX personnel to the Property, where mapping and sampling were conducted through traverses which were spaced on average between 200 m and 500 m apart. Mapping was predominantly focused on the creeks and drainages, where outcrop exposure was the greatest. The areas between the creeks were in-filled as a secondary priority, as rock outcrops were less abundant.

Mapping of various lithologies was completed by marking outcrop locations on paper maps and taking geographic points using a handheld GPS. Strike and dip measurements were taken wherever possible, using magnetic compasses. Additional field notes on outcrop characteristics, lithologies, mineralogy, orientation, graphite content and form, were written in field books.

Rock grab samples were taken from various lithologies throughout the Graphite Creek Property, particularly when visible graphite was observed. Rock grab samples included disseminated graphite through to massive graphite samples. A total of 591 rock grab samples were collected throughout the Property. Rock grab and channel samples are discussed in more detail in the following section '2012 Rock Grab and Channel Sample Program'.

Figure 10. Geological map of the Graphite Creek Maiden Inferred Resource Estimate area.



The Kigluaik Fault generally strikes 250º azimuth and dips 75º to the north over an observed distance of some 18 km. The fault has slight strike variations, which from west to east include a strike direction of 240° azimuth over 2.5 km, followed by a 265° azimuth over 2 km. A 5 km stretch of the fault is at an azimuth of 255°, increasing to 265° over 6 km. Finally, the east end of the fault is at an azimuth of 260° over 3 km, where the fault seems to dissipate on the EM geophysical survey.

Major geological units within the resource estimate area, as interpreted by the 2012 geological mapping program are shown on Figure 10 and include:

Sillimanite-garnet-biotite-quartz schist

- 0.05-51% Cg as disseminations and sheets, up to 80.9% Cg in lenses, or pods
- minor plagioclase, feldspar, tourmaline and amphiboles
- garnet up to 3.5 cm in diameter
- fine to coarse grain sizes
- euhedral > anhedral sillimanite; up to 15 cm in diameter
- low to moderate quartz veining
- patchy silicification
- wavy foliations
- occasionally weakly to moderately rusty weathering
- sporadic cm-scale folding

Biotite-quartz schist

- 0.05-51% Cg as disseminations
- minor plagioclase-feldspar and tourmaline
- absence of sillimanite
- does occasionally include garnet up to 1.5 cm in diameter
- fine to coarse grain sizes
- mainly straight foliations
- low to moderate quartz veining
- minor low to moderate calcite veining
- patchy silicification
- fissile weathering
- weakly to strongly rusty ochre-coloured weathering
- rare cm- to m-scale folding

Minor geological units in the resource estimate area include quartz-diorite (Kg), gneiss (gn), quartzite (qtz) and marble (mbl), all of unknown ages (Figure 10).

Both schist units contain roughly between 0.05% and 51% Cg. The sillimanite-garnet-biotite-quartz schist is typically high-grade due to graphite concentrated as sheets and segregations (lenses and pods) which contain up to 80.9% Cg. The quartz-diorite contains between roughly 0.05% and 1.3% Cg as disseminations and occasionally as small aggregates less than 0.5 cm wide.

Interbedded layers of both high-grade and lower-grade schists are continuous throughout the resource estimate area and throughout the Graphite One Property. The biotite-quartz-(±garnet) schist is generally more abundant in total volume than the sillimanite-garnet-biotite-quartz schist. Occasional inter-fingering and lenses occur, although the units are generally continuous from east to west. On average, three continuous layers of high-grade sillimanite-garnet-biotite-quartz schist were observed within the resource estimate area, all of which are near or adjacent to the Kigluaik Fault.

The graphite mineralization has a surface thickness average of roughly 100 m thick, up to roughly 225 m adjacent to the Kigluaik Fault. Like the fault zone, the units generally strike at azimuth 250º with a general north-northwest dip of approximately 60º. Based on the visible lithologies mapped and their measurements, it is quite obvious that the schistose units are continuous throughout the resource estimate area (see Figure 10).

The Kigluaik Fault is the main structure in the resource estimate area and throughout the Graphite One Property. The fault strikes at azimuth 250º and dips 75º to the north-northwest. The Kigluaik Mountains show evidence of large m- to km-scale folding. Within the Property, cm-scale folding was observed mainly within the high-grade sillimanite-garnet-biotite-quartz schist, rarely within the biotite-quartz-(±garnet) schist, up to m-scale. No regional or cross-unit folding was observed. All units dipping generally north-northwest suggest the absence of major regional folding within the resource estimate area. This provides further evidence that the inter-bedded schist units and continuous along strike, rather than folded.

9.2 Surficial Whole Rock Geochemical Surveys

9.2.1 2011 Rock Grab Samples

The graphite showings have undergone numerous small-scale whole rock geochemical surveys, all of which reported high-grade graphite. For example, Coats (1944) and Hudson (1981) documented high-grade graphite lenses comprising up to 59.7% and 58.2% graphite, respectively. Adler and Bundzten (2011) collected composite chip samples across outcrops containing up to 45.8% graphite (Table 7).

Two sets of samples were collected for Graphite One by Hudson (2011). Rock grab and small composite samples were sent for geochemical analysis. Larger composite samples were sent for petrographic, x-ray fluorescence and screen analysis. While the chemistry of the latter large composite samples is discussed here, the petrographic and screen analysis is discussed in the ‘Physical Properties’ section that follows.

The rock grab and composite grab samples were collected from areas displaying graphite mineralization; resampling historic pits and other sample locations. A total of 18 rock samples were taken during the 2011 field program, of which eight samples were analyzed for carbon (Table 8; Figure 11; Appendix 2 and 3). In addition, large composite samples comprising high-grade, disseminated and a mixture of high-grade and disseminated graphite were also analyzed for carbon (see ‘Section 13 Mineral Processing and Metallurgy).

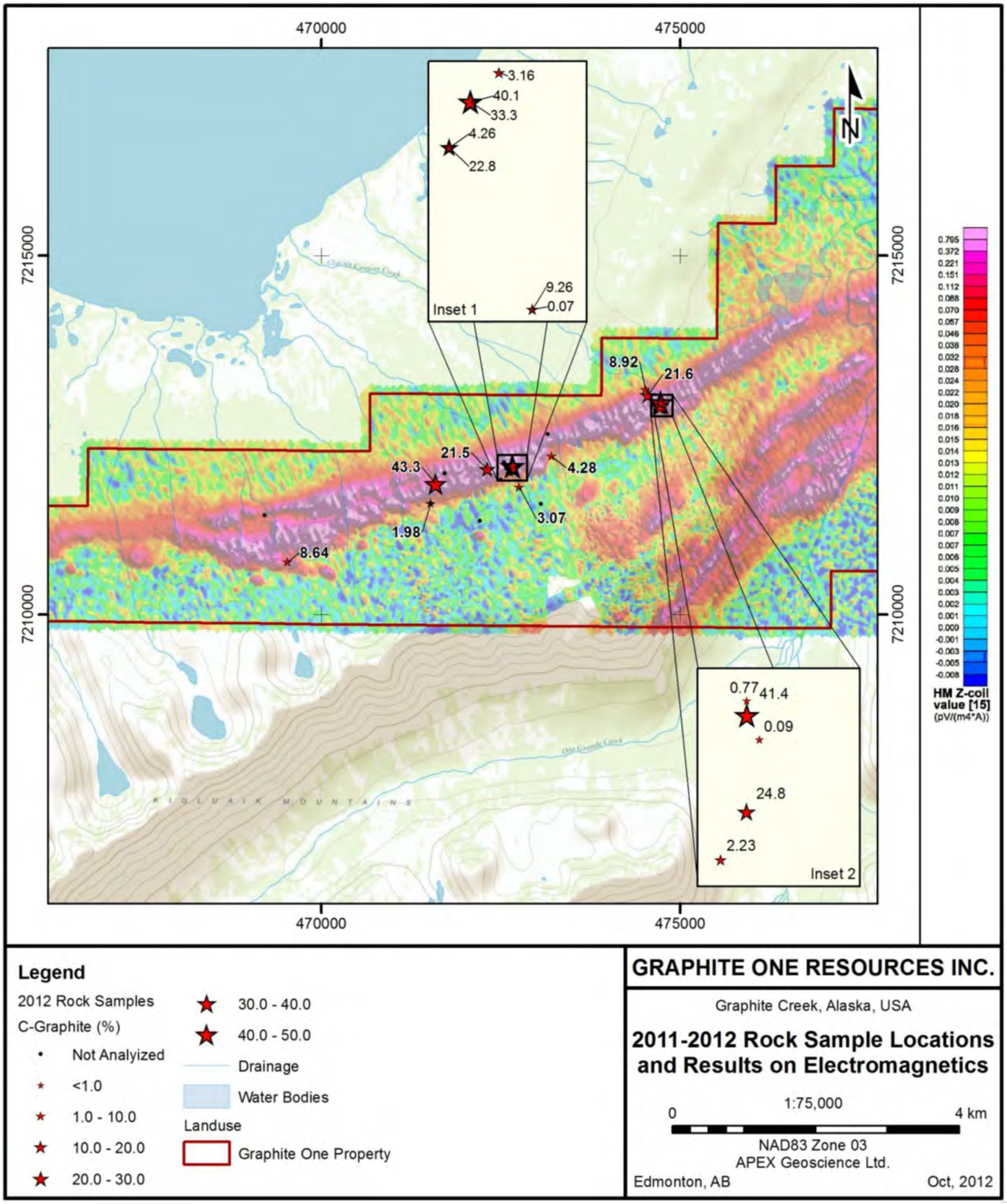
Table 7. Sample results from Alder and Bundtzen (2011).

Sample	Length (m)	Total C %	Inorganic C%	Graphite C %	Location
94-BT-183A	1	8.18	0.07	8.1	Glacier Canyon Creek (*sic:* Graphite Creek)
94-BT-183B	2	45.91	0.07	45.8	Glacier Canyon Creek (*sic:* Graphite Creek)
94-BT-183C	1.1	31.43	0.04	31.3	Glacier Canyon Creek (*sic:* Graphite Creek)
94-BT-183E	2	38.2	0.06	38.1	Glacier Canyon Creek (*sic:* Graphite Creek)
94-BT-184	16	8.36	0.04	8.32	Glacier Canyon Creek (*sic:* Graphite Creek)
94-BT-185 B and C	5	19.47	0.06	19.4	Christophosen Adit
94-BT-181	1.6	23.21	0.04	23.1	Ruby Creek

Table 8. 2011 sample results from collected by Graphite One Resources Inc. (from Hudson, 2011).

Sample	Lithology	C Total %	C Organic %	CO_2	C Graphite %
	Analytical method (detection limit)	Infrared (0.01%)	Infrared (0.05%)	Coulometry (0.01%)	Infrared (0.05%)
2103	Fine-grained biotite quartz schist	4.54	0.26	0.17	4.28
2105	Fine-grained laminated biotite quartz schist	3.24	0.14	0.13	3.07
2114	Rusty orange-weathering schist	2.12	0.13	0.03	1.98
2108	Garnet biotite quartz schist	21.8	0.9	0.2	21.5
2111	Garnet biotite quartz schist	9.1	0.44	0.06	8.64
2115	Garnet biotite quartz schist	43.6	0.3	0.05	43.3
2118	Garnet biotite quartz schist	9.74	0.8	0.09	8.92
2119	Garnet biotite quartz schist	21.6	0.76	0.04	21.6

Figure 11. Location of Hudson (2011) and Eccles (2012) rock samples taken at the Graphite Creek Property. The electromagnetic base map image is from the SkyTEM airborne geophysical, which is discussed in more detail in the '2012 SkyTEM Geophysical Survey' section.



A high grade composite sample (52857-1) from an old stockpile collected during the 2011 field program returned 'combined' (i.e., assayed head) graphite grades of 56.9% (see 'Section 13 Mineral Processing and Metallurgy, Table 13). This value correlates well with other documented assays, including Coats (1944), Hudson (1981) and Alder and Bundtzen (2011). The graphite content of the sillimanite-garnet-biotite-quartz schist is also represented by four grab samples taken in 2011, two from Graphite Creek, one from the ridge west of Trail Creek, and one taken from the ridge west of Christophosen Creek (Hudson, 2011; samples 2108, 2111, 2118, and 2119; Table 8). The graphite contents of these samples contain 8.6% to 43.3% graphite, reflecting the common inclusion of high-grade graphite segregations within the sillimanite-garnet-biotite-quartz schist.

Three grab samples of the biotite-quartz schist (samples 2103, 2105, and 2114) containing disseminated graphite yielded 4.3%, 3.1% and 1.9% Cg, respectively. These results correlated well historical biotite-quartz schist assays suggesting that the background levels of graphite in the biotite-quartz schist contain at least 2%. However, a composite chip sample across a 16 m section of biotite-quartz schist at Glacier Canyon Creek (*sic:* Graphite Creek) suggest that the 'background' graphite content might be higher than 2% (Alder and Bundtzen, 2011; Table 7; sample 94-BT-184 yielded 8.32% graphite).

Lastly, R. Eccles was able to verify elevated graphite concentrations in both the sillimanite-garnet-biotite-quartz schist and biotite-quartz schist (Table 6). Grab samples from in-place sillimanite-garnet-biotite-quartz schist bedrock yielded up to 41.4% Carbon. Biotite-quartz schist assayed between 2.2% and 33.3% Carbon.

9.2.2 2012 Rock Grab and Channel Sample Program

On behalf of Graphite One, APEX personnel collected a total of 591 rock grab samples from throughout the Graphite One Property area between June 16, 2012 and August 21, 2012 (Figure 12; Appendix 2 and 3). The rock sampling was conducted in conjunction with the geological mapping program. Sample collection generally targeted visible graphite mineralization, along with various lithologies and structural features in order to aid in geological mapping and future target delineation. Subsequently, all rock lithologies encountered during the mapping program were sampled.

In addition to grab samples, APEX personnel collected a total of 31.31 m of channel material (32 total samples) between August 20 and 23, 2012 (Figure 12; Appendix 2 and 3). The channel samples represent continuous sampling over 1 m intervals. The channel samples were collected from two separate outcrops along Graphite Creek. Channel 1 is 24.7 m long, and Channel 2 is 6.7 m long.

The locations of the 2012 rock samples are shown on Figure 12, together with 2011 rock samples. All samples were analyzed for specific gravity and graphitic carbon (Cg), and 2011 and 2012 rock samples with >10% Cg are shown on Figure 13. The figures show that exposed bedrock from throughout the Property contains moderate to abundant graphite. Of the 591 grab samples collected in 2012, 11 samples yielded >45% Cg (up to 80.9% Cg), 47 samples had >10% Cg and 137 samples had >3% Cg.

Figure 12. Location of 2011 and 2012 grab, channel and bulk pit rock samples.

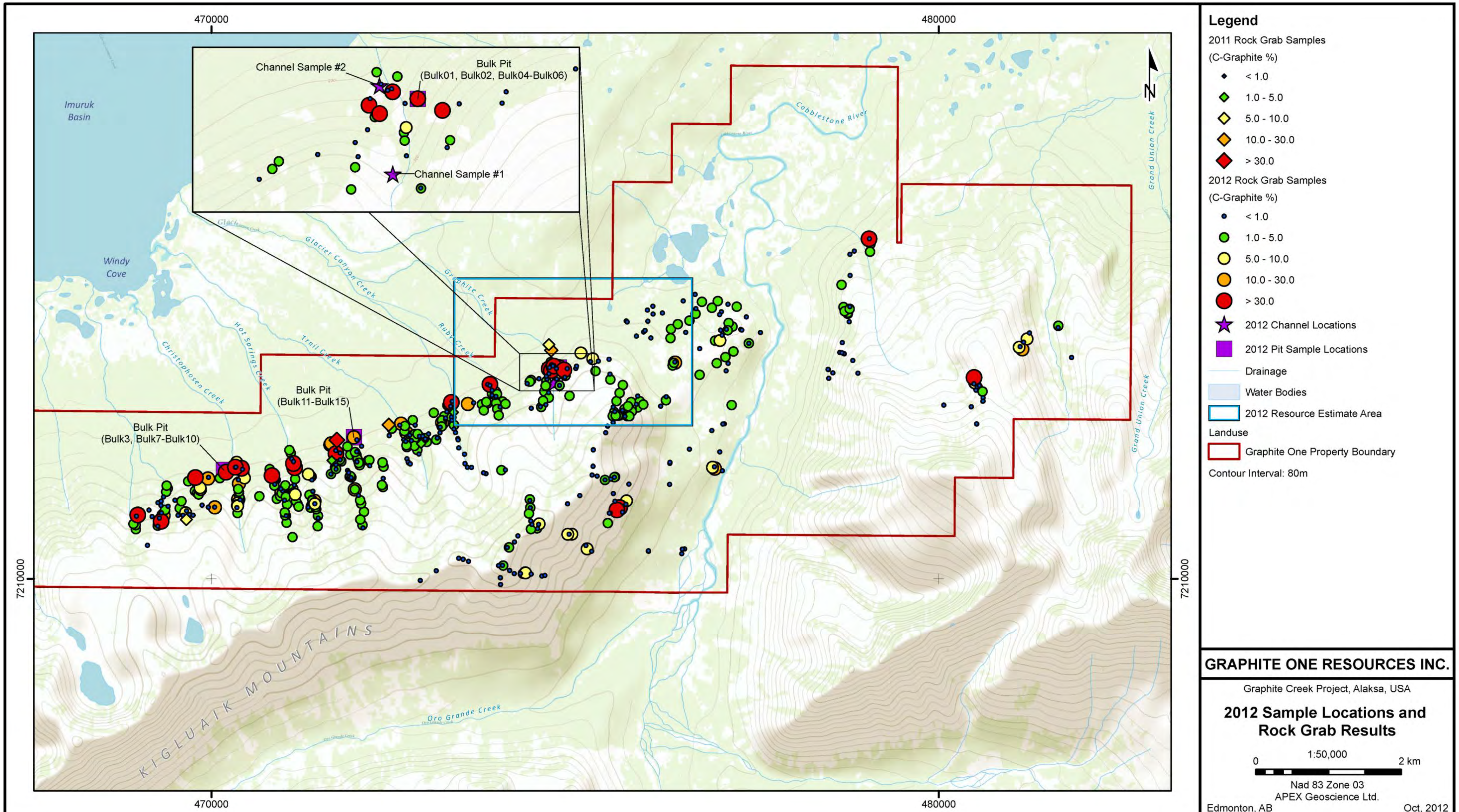
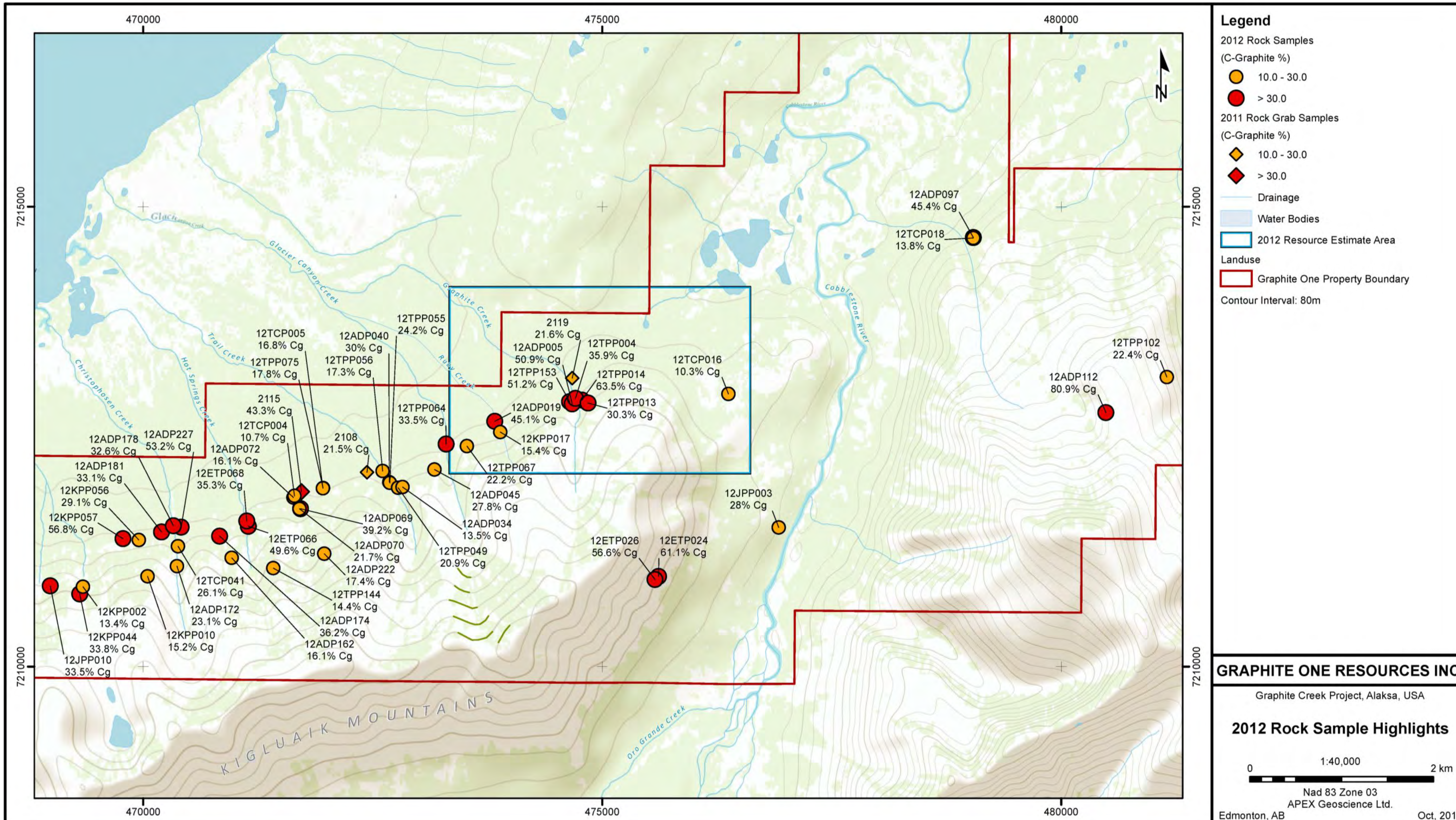


Figure 13. Selected 2011 and 2012 sample locations with exposed surface samples comprising >10% graphitic carbon.



The rock sample results show that graphite-bearing sillimanite-garnet-biotite-quartz schistose rocks continue westwards from the Maiden Inferred Resource Estimate area adjacent to the Kigluaik Fault. However, graphitic schist was also discovered in exposed outcrops in the far southern and eastern portions of the Graphite Creek Property. One sample, 12ADP112, collected in the eastern part of the Property contained 80.9% Cg from 1.0 x 3.0 m lens of graphite in moderately silicified schistose rocks. At higher elevations in the southern part of the Property, two samples (12ETP026 and 12ETP024) contained 56.6% Cg and 61.1% Cg in graphite-rich segregated lenses that were 30-40 cm wide and up to 2 m long in sillimanite-garnet-biotite-quartz schist (Figure 13).

The channel samples were taken in biotite-quartz schist and subsequently contain low graphitic carbon values of <0.7% Cg.

9.2.3 2012 Bulk Pit Sample Program

Bulk pit sampling was also conducted during 2012. Fifteen bulk samples of between 558 kg and 739 kg (totaling 9,916 kg) were collected from three different areas including Graphite Creek, Christophosen Creek and Child Drainage (Table 9; Figure 12). The samples were collected by APEX personnel and loaded directly into bulk sample rice bags. The bags were identified with aluminum tags strapped to the corner handles, and labels were written on the sides. They were then shipped by truck to the Graphite One preparation laboratory (the “prep lab”) in Nome, Alaska. Subsequently, the samples were barged to Seattle, and then trucked to Activation Laboratories Ltd. in Thunder Bay, Ontario for analysis. The samples are currently being stored at Activation Laboratories Ltd., where analytical test work is pending.

9.3 2012 SkyTEM Geophysical Survey

9.3.1 SkyTEM System Overview and Survey Details

SkyTEM is a helicopter-borne time-domain, electromagnetic and magnetic (TDEM) system with instrumentation that includes a data acquisition system, two differential Global Position Satellites (GPS), two inclinometers, two altimeters and a cesium-vapour magnetometer. The SkyTEM system is capable of operating in two transmitter moments, Super Low Moment (SLM) and High Moment (HM). The SLM mode uses low peak current, high base frequency and fast turn off (11.2 μs – 1.4 ms after the start of the current ramp) to provide early-time data and high spatial sampling for shallow imaging. The HM measurements use a high peak current with a longer ramp time to obtain data between times of 73 micro-seconds (μs) to 8.8 milliseconds (ms) and low base frequency to provide high quality late-time data for deep imaging. In most surveys, the data are acquired sequentially at HM and SLM, with the system continuously alternating between the two modes. The ability to map in Dual Mode makes it possible to map the near surface and at depth in a single survey pass. It also assists in discriminating more resistive or conductive layers.

The SkyTEM survey was collected by helicopter over the Graphite Creek Property in two phases. A total of 1,523.5 line-kilometres were flown. The first phase collected survey data during May 2012 and the second phase collected survey data over newly acquired claims during July and August 2012. The two survey phases were

Table 9. Summary of 2012 mini-pit samples.

Location	BULK #	Grade	Weight (lb)	Weight (kg)
Graphite Creek	BULK01	High	1230.0	557.9
Graphite Creek	BULK02	High	1220.0	553.4
Graphite Creek	BULK04	Medium	1730.0	784.7
Graphite Creek	BULK05	Low	1580.0	716.7
Graphite Creek	BULK06	Low	1250.0	567.0
Christophosen Creek	BULK03	High	1240.0	562.5
Christophosen Creek	BULK07	High	1580.0	716.7
Christophosen Creek	BULK08	High	1500.0	680.4
Christophosen Creek	BULK09	Low	1650.0	748.4
Christophosen Creek	BULK10	Low	1430.0	648.6
Child Drainage	BULK11	Low	1500.0	680.4
Child Drainage	BULK12	High	1000.0	453.6
Child Drainage	BULK13	Medium	1650.0	748.4
Child Drainage	BULK14	Low	1670.0	757.5
Child Drainage	BULK15	Medium/high	1630.0	739.4
		Total Weight:	**21860.0**	**9915.5**
		Average Weight:	**1457.3**	**661.0**

collected over adjoining blocks using SkyTEM systems with identical system calibrations. The configuration of the surveys was planned to consist of 50 m traverse-lines oriented northeast-southwest (Az 065°) between tie-lines spaced 500 m apart and oriented northwest-southeast (Az 155°; Table 10). Due to bad weather and logistical issues with the helicopter, not all of the lines could be flown during the second survey phase. The summit areas in the North Eastern Block could not be accessed regularly, so the line spacing was increased to 200 m to get the area covered, and then the area was followed up with infill-lines as time and weather permitted.

Table 10. SkyTEM survey details.

Survey	Line Type	Line numbers	Line-orientation	Line spacing
Original Area #1 (South Western Block)	Traverse-Line	100101 – 127201 and 300031 – 309301	NE/SW (Az065°)	50 m
	Tie-Line	200101 – 200903 and 400101 – 400801	NW/SE (Az155°)	500 m
Extension Area #2 (North Eastern Block)	Traverse-Line	500101 – 520001	NE/SW (Az065°)	50 m / 200 m
	Tie-Line	600101 – 601301	NW/SE (Az155°)	500 m

Flight operations were based out of Nome, Alaska. The average airspeed of 42.8 km/hour is much less than the planned airspeed of 60-80 km/hour because of the rugged terrain and windy conditions. The average calculated terrain clearance was 51.7 m, also greater than the planned terrain clearance of 30m due to obstacles and hazards in the rugged terrain.

9.3.2 SkyTEM Survey Results

Examples of the electromagnetic (EM) and magnetic grids over the Graphite Creek Property are presented in Figures 14 and 15, respectively. Two substantial observations from the SkyTEM airborne survey data include: 1) the pronounced outline of the Kigluiak Fault, and 2) the overall continuity and length of the EM anomaly.

The northern boundary of the EM anomaly depicts sharply contrasting graphite-bearing versus non-graphite-bearing rocks. Because high-grade graphite schistose rocks occur directly adjacent to the Kigluiak Fault (in the footwall), the northern edge of the elongated northeast-trending anomaly essentially outlines the Kigluiak Fault. In addition, Figure 14 shows a series of parallel high-EM 'bands' that occur southwards of, and in the same orientation as, the Kigluaik Fault. The general location and width of these high-EM bands (in the west-central part of the Property) correlate well with current geological mapping. That is, the high-EM bands seem to mimic the geological layers of high-grade graphitic sillimanite-garnet-biotite-quartz schist (see Figures 9 and 10). The highest EM bands are then surrounded by a slightly less elevated (but still anomalous) EM signature that is diagnostic of the disseminated-grade graphite biotite-quartz schist. In contrast, the surrounding non-graphite-bearing geological unit on the northern side of the fault has a dramatically lower EM signature.

Figure 14. SkyTEM helicopter-borne time-domain electromagnetic image; High Moment Z-coil Channel 05. Warms colours (red) represent high signal and cold colours (blue) represent low signal.

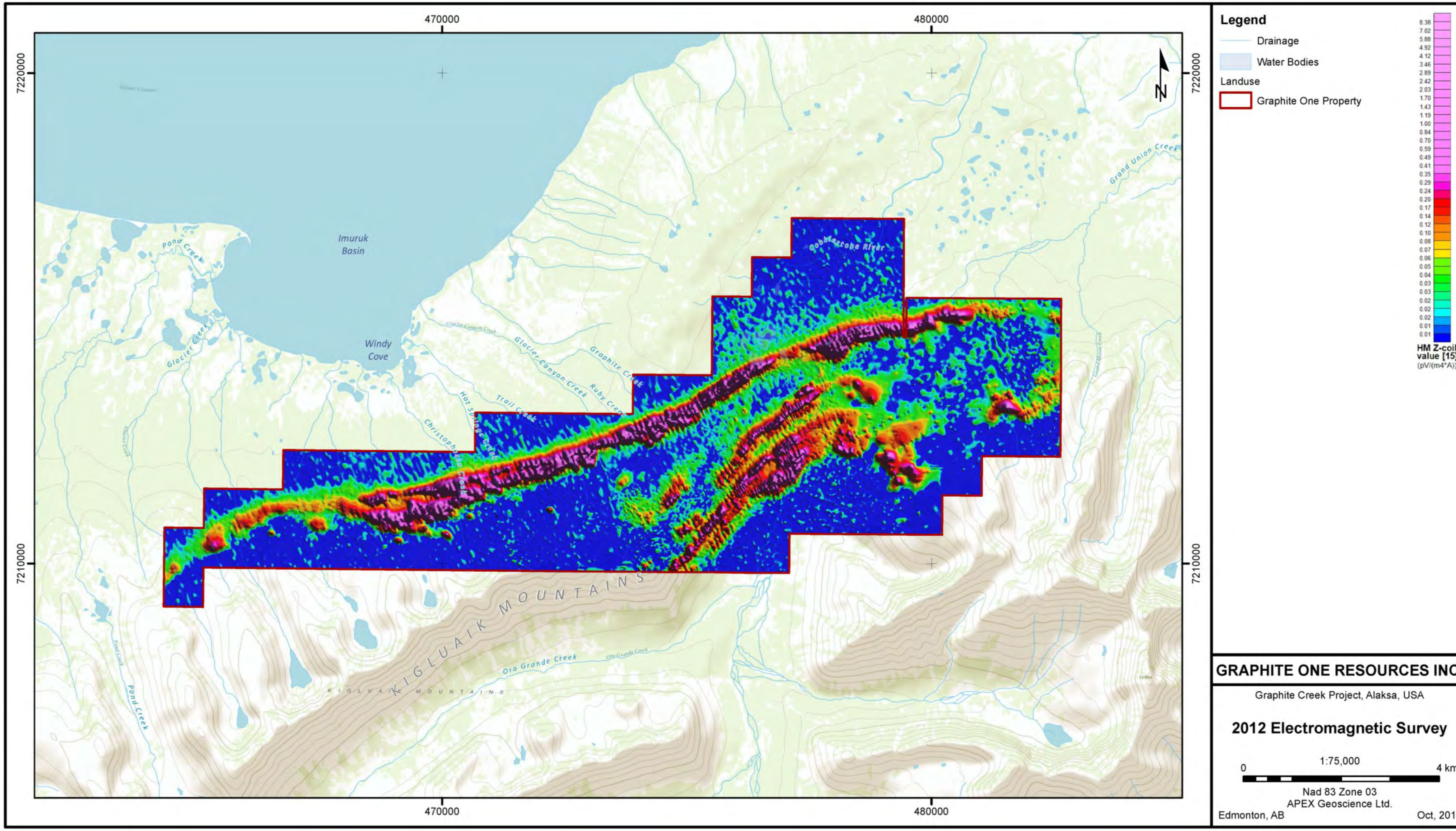
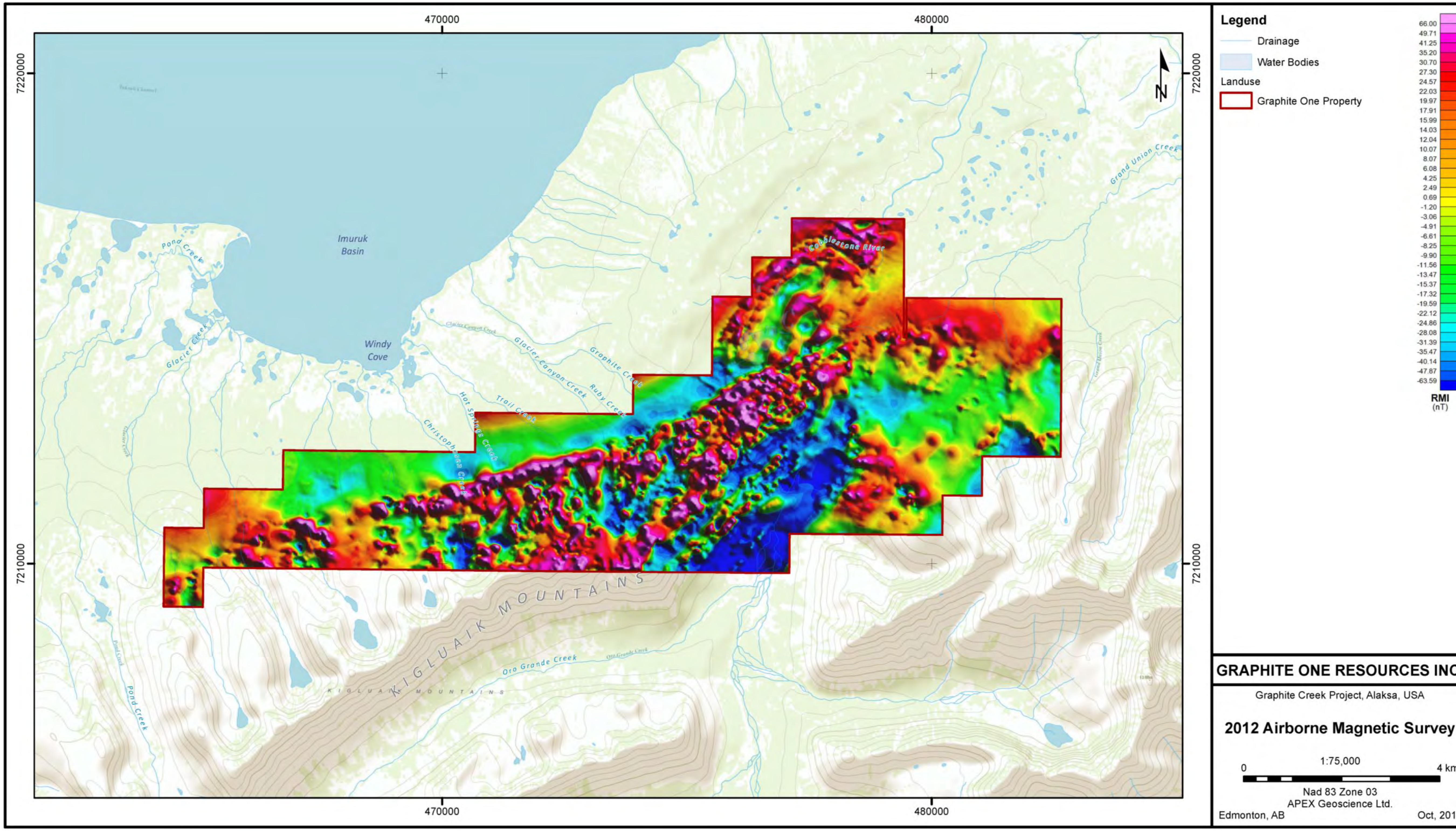


Figure 15. SkyTEM helicopter-borne corrected residual magnetic intensity (RMI) image.



With respect to the overall anomaly length, the primary objective of the SkyTEM survey was to provide some sense as to what happens to the high-grade graphite schistose rocks in the subsurface areas between exposed graphite showings. The EM anomaly (Figure 14), and to a lesser degree the magnetic anomaly (Figure 15), both show a continuous highly anomalous geophysical signature that extends in a northeast-trending linear direction for approximately 18 km.

Based on the correlation between the high-EM anomaly, mapped stratigraphy with high-grade graphite (i.e., the sillimanite-garnet-biotite-quartz schist), 2012 drill results, and high-grade graphite from 2011 and 2012 analytical results, we conclude that the high-grade graphite zone correlates well with the EM anomaly. Hence an important conclusion of the SkyTEM survey is the likelihood that high-grade graphite mineralization at the Graphite Creek Property extends continually for a distance of at least 18 km (Figure 14).

The anomalous linear trend in both the EM and magnetic data are particularly evident in the central part of the Property (over a distance of about 11.6 km) with some disruption in the distinctness of magnetic profile (in particular) occurring at either end of the Property (Figure 15). To the southwest, the magnetic fabric along the main linear zone is discontinuous in comparison to the fabric in the central part of the Property. It is possible that a reorientation of the geological units (i.e., change of dip) and/or a series of inferred faults disrupt the magnetic fabric in the southwestern part of the Property.

To the far northeast part of the Property, a profound change in the geology seems apparent based on the change in the magnetic data. The magnetic picture is so different in the far northeast corner of the surveyed block that this area might be underlain by a geological substrate that is different in nature from the substrate underlying the central and southwestern portions of the Property. Lastly, several lineaments appear to cut through the high-magnetic signature in the central part of the Property; these lineaments have an approximate northeast to north-northeast orientation.

10 Drilling

To the best of the author's knowledge, the Graphite One Property has not historically been drill tested prior to Graphite One's 2012 summer exploration campaign. A 2012 drill program was completed by APEX on behalf of Graphite One between June 29th 2012 and 17 August, 2012.

The program drilled 18 drillholes totaling 4,248 m (Tables 11 and 12, Figure 16; Appendix 4). The objective of the program was to test a specific area of known surficial graphite mineralization with a sufficient enough drill spacing to produce a Maiden Inferred Resource Estimate. Based on historical assays, preliminary Property inspection and sampling, and the results of the airborne geophysical survey, the majority (17 drillholes) were collared in the central portion of the Property near Graphite Creek essentially defining the Maiden Inferred Resource Estimate area (Figure 16). An 18th drillhole represents a step-out hole to test graphite mineralization away from the main drillhole target area.

Table 11. Summary of drillhole specifications.

Drillhole ID	Easting (m) NAD83-Zone03	Northing (m) NAD83-Zone03	Elevation (m)	Total depth (m) [1]	Start date	End date	Drillhole aziumuth (°)	Drillhole dip (°)	Drill rig type
12GC001	474716	7213034	222	428.85	29-Jun-12	05-Jul-12	161.2	-50.9	LF70
12GC002	474437	7212914	225	380.10	05-Jul-12	10-Jul-12	159.9	-49.0	LF70
12GC003	474252	7212838	219	291.70	11-Jul-12	15-Jul-12	158.2	-50.8	LF70
12GC004	475749	7213665	129	258.20	16-Jul-12	22-Jul-12	163.9	-49.9	LF70
12GC005	474917	7213118	257	252.10	25-Jul-12	27-Jul-12	160.8	-49.6	LF70
12GC006	475143	7213189	293	274.02	29-Jul-12	01-Aug-12	160.6	-50.2	LF70
12GC007	475365	7213461	193	275.85	01-Aug-12	08-Aug-12	169.7	-50.2	LF70
12GC008	475574	7213571	156	232.90	08-Aug-12	11-Aug-12	157.6	-50.0	LF70
12GC009	475935	7213747	119	233.20	12-Aug-12	15-Aug-12	157.4	-51.5	LF70
12GC010	476103	7213852	107	230.21	16-Aug-12	18-Aug-12	159.5	-49.9	LF70
12GCH001	474416	7212823	259	172.82	27-Jul-12	29-Jul-12	160.9	-49.3	Hydracore
12GCH002	474379	7212784	269	166.73	30-Jul-12	02-Aug-12	161.7	-49.5	Hydracore
12GCH003	474335	7212765	269	169.77	03-Aug-12	05-Aug-12	157.1	-49.0	Hydracore
12GCH004	474515	7212859	254	160.63	06-Aug-12	08-Aug-12	157.6	-48.8	Hydracore
12GCH005	474515	7212859	254	178.92	08-Aug-12	11-Aug-12	147.5	-87.2	Hydracore
12GCH006	474622	7212920	247	177.39	11-Aug-12	14-Aug-12	158.1	-49.2	Hydracore
12GCH007	474789	7213006	256	177.39	14-Aug-12	16-Aug-12	156.6	-49.7	Hydracore
12GCH008 [2]	472160	7211831	258	188.06	17-Aug-12	22-Aug-12	160.4	-49.9	Hydracore

[1] Total drillhole meterage is 4,248.84 m

[2] Drillhole 12GCH008 is outside the main drill program area; subsequently a total drillhole depth of 4,060.78 m was used in this inferred resource estimate Technical Report (i.e., excluding 12GCH008).

The drillholes in the Maiden Inferred Resource Estimate area are spaced between 50 m and 320 m apart. The initial drillhole spacing was generally 200 m spaced. During the later stages of the program, infill drilling was initiated starting on the western portion of the drill zone at a spacing of approximately 50 m. The drill program was halted on 17 August 2012 due to incremental winter weather and the end of the summer program. Subsequently, infill drilling is not completed along the entire length of the resource estimate area (to date).

The graphite bearing rocks dip at approximately 60°. With the exception of one drillhole (12GCH005; -87° dip), all drillholes were drilled at -49° to -51° dip to best attempt to test the true thickness of mineralization. Minimum and maximum drillhole depths was 160.63 (drillhole 12GCH001) and 428.85 m (drillhole 12GC001), respectively. Collectively, the drillholes averaged 236 m in total depth.

The drill core was sampled approximately every metre, but did not sample across geological contacts; in these instances the sample start depth was restarted and one metre increments were sampled to the next contact or geological feature. The minimum sample interval was 0.23 m and the average sample interval of 4,106 drill core samples collected (not including duplicates and blanks) was 0.96 m.

Figure 16. Location of the 18 drillholes drilled during the 2012 exploration program, 17 of which are used in the Maiden Inferred Resource Estimate for this Technical Report. Drillhole 12GCH008 was collared outside the resource estimate area to test the potential for continuous high-grade mineralization along the geophysical conductor. Also shown are selected assay intervals.

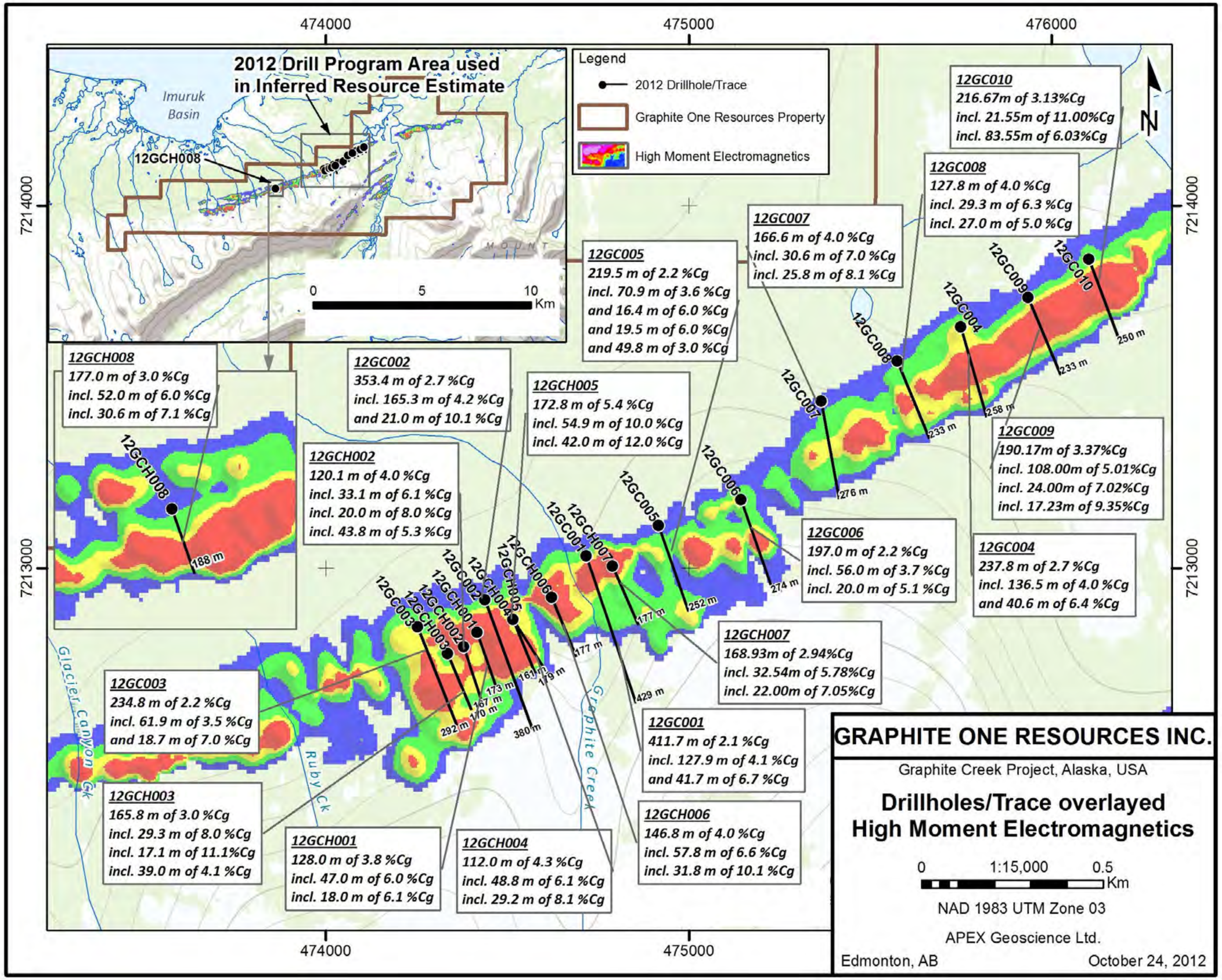


Table 12. Selected assay intervals from drill core that was analyzed in the Maiden Inferred Resource Estimate area.

Drillhole (hole length)	Sample from (m)	Sample to (m)	Interval length (m)	Number of samples analyzed	Grade (% Cg)
12GC001 (428.85 m)	17.13	428.85	411.72	434	2.08
	17.13	202.74	185.61	199	3.49
	17.13	58.86	41.73	47	6.67
	17.13	145.00	127.87	136	4.10
	21.60	52.15	30.55	35	7.77
	76.02	96.00	19.98	22	6.18
	86.95	94.00	7.05	8	10.88
	110.91	153.22	42.31	43	3.01
	132.00	145.00	13.00	13	5.37
	155.00	202.74	47.74	52	2.21
	213.00	218.00	5.00	5	3.10
12GC002 (380.09 m)	26.70	192.00	165.30	178	4.23
	26.70	380.09	353.39	370	2.67
	26.70	73.11	46.41	50	6.60
	26.70	41.00	14.30	15	10.11
	86.00	192.00	106.00	114	3.68
	122.00	143.00	21.00	25	10.06
	211.00	226.00	15.00	16	2.91
	232.00	283.00	51.00	51	1.98
	320.00	350.00	30.00	31	1.68
12GC003 (291.70 m)	30.13	48.00	17.87	20	4.33
	73.29	93.00	19.71	21	6.72
	76.00	91.00	15.00	16	7.77
	112.00	154.00	42.00	43	2.52
	120.00	124.00	4.00	4	8.75
	169.00	220.00	51.00	51	1.65
	238.00	265.83	27.83	28	2.29
12GC004 (258.17 m)	20.42	195.00	174.58	178	3.52
	20.42	59.92	39.50	41	6.52
	21.00	51.00	30.00	31	7.39
	21.00	38.00	17.00	17	9.63
	85.30	195.00	109.70	114	3.23
	86.00	133.00	47.00	48	4.63
	93.55	98.00	4.45	5	10.86
	120.35	122.00	1.65	2	21.85
	148.00	154.00	6.00	7	6.24

Drillhole (hole length)	Sample from (m)	Sample to (m)	Interval length (m)	Number of samples analyzed	Grade (% Cg)
12GC005 (252.07 m)	32.61	217.00	184.39	190	2.58
	32.61	58.55	25.94	26	4.62
	32.61	51.00	18.39	18	5.71
	35.00	37.00	2.00	2	11.05
	82.27	119.00	36.73	39	3.91
	84.00	93.75	9.75	10	8.12
	89.00	93.75	4.75	5	11.75
	140.19	166.05	25.86	27	3.71
	171.25	186.20	14.95	15	2.62
	206.00	217.00	11.00	11	2.62
12GC006 (274.02 m)	13.97	209.25	195.28	204	2.22
	13.97	26.00	12.03	11	3.76
	33.40	70.00	36.60	40	4.31
	66.73	68.95	2.22	2	14.59
	101.00	209.25	108.25	114	2.24
	124.11	135.00	10.89	12	4.24
12GC007 (275.85 m)	59.38	223.27	163.89	169	4.07
	59.38	89.31	29.93	32	7.17
	110.00	164.00	54.00	55	5.79
	120.33	144.77	24.44	25	8.22
	169.00	223.27	54.27	55	2.49
12GC008 (232.87 m)	41.19	169.00	127.81	134	4.02
	41.19	70.48	29.29	33	6.32
	49.00	59.00	10.00	11	9.09
	90.84	188.00	97.16	100	3.76
	108.00	135.00	27.00	28	5.02
12GC009 (233.17 m)	44.15	199.00	154.85	164	4.07
	44.15	125.00	80.85	89	5.88
	57.00	77.06	20.06	23	7.81
	94.31	111.54	17.23	21	9.35
	130.00	199.00	69.00	69	2.23
12GC010 (230.21 m)	13.45	187.00	173.55	174	3.80
	13.45	34.00	20.55	18	11.49
	54.27	187.00	132.73	135	3.15
	85.00	96.00	11.00	11	8.24

Drillhole (hole length)	Sample from (m)	Sample to (m)	Interval length (m)	Number of samples analyzed	Grade (% Cg)
12GCH001 (172.82 m)	7.00	135.00	128.00	130	3.79
	7.00	55.17	48.17	48	5.93
	9.00	30.00	21.00	21	7.35
	22.00	30.00	8.00	7	8.66
	39.00	43.00	4.00	4	10.24
	71.61	135.00	63.39	65	3.10
	72.00	86.50	14.50	15	6.86
12GCH002 (166.73 m)	3.93	100.87	96.94	97	4.62
	3.93	35.65	31.72	32	6.35
	10.00	26.62	16.62	17	8.79
	57.06	100.87	43.81	45	5.31
	59.00	78.31	19.31	20	7.82
	59.00	64.87	5.87	6	10.18
12GCH003 (169.77 m)	3.94	169.77	165.83	179	3.04
	3.94	33.25	29.31	31	8.00
	3.94	21.00	17.06	19	11.07
	60.00	106.00	46.00	50	4.02
	70.00	86.21	16.21	18	6.20
	152.00	169.77	17.77	19	2.23
12GCH004 (160.63 m)	5.97	160.63	154.66	166	3.41
	5.97	126.00	120.03	130	3.98
	5.97	48.63	42.66	50	6.88
	6.71	30.00	23.29	28	8.93
	93.00	100.00	7.00	7	5.76
12GCH005 (178.92 m)	6.13	178.92	172.79	183	5.39
	6.13	62.00	55.87	57	9.87
	8.00	50.00	42.00	43	12.01
	83.00	178.92	95.92	103	3.94
12GCH006 (177.39 m)	12.23	159.00	146.77	157	4.00
	12.23	70.00	57.77	61	6.56
	12.23	44.00	31.77	35	10.14
	88.00	177.39	89.39	97	2.85
12GCH007 (177.39 m)	8.46	177.39	168.93	176	2.94
	8.46	41.00	32.54	34	5.78
	10.00	29.00	19.00	20	7.23
	60.00	82.00	22.00	22	4.20
	94.00	177.39	83.39	89	2.49
	120.00	125.00	5.00	5	9.43

The analytical results include 29 samples yielding >30% Cg, 208 samples with >10% Cg and 1,249 samples containing >3% Cg. Selected geochemical assays on a hole by hole basis are shown on Table 12 and Figure 16. Examples of selected results from individual drillholes include:

- Drillhole 12GC004: 48 m of 4.63% Cg with sub-intersections of 4.45 m of 10.86% Cg and 1.65 m of 21.85% Cg;
- drillhole 12GCH005: 173 m of 5.39% Cg with sub-intersections of 10.03% Cg over 55 m and 12.01% Cg over 42 m;
- drillhole 12GCH006: 147 m of 4.0% Cg with sub-intersections of 6.56% Cg over 58 m and 10.14% Cg over 32 m; and
- drillhole 12GC010: 173.55 m of 3.80% Cg with a sub-intersection of 20.55 m of 11.49% Cg

Table 12 shows that every drillhole intersected graphite mineralization. The graphite mineralization typically occurs throughout the length of the drill core. For example, drillhole 12GC007 contains 4.02% Cg over 164 m between depths of 59 m and 223 m. The results confirm that graphite mineralization exposed at surface extends to vertical depths of over 225 m.

The 18th drillhole completed during the 2012 program represents a step-out hole to test graphite mineralization along the geophysical conductor (Figure 16). Drillhole 12GCH008 was collared approximately 2.2 km west of the main drill zone. Drill core analytical results include 177 m of 3.0% Cg including 6.02% Cg over 52 m and 7.07% Cg over 31 m. The step-out hole shows the potential for continuous high-grade mineralization along the geophysical conductor.

11 Sample Preparation, Analyses and Security

11.1 Rock Sample Collection

Rock grab and channel samples were collected by APEX personnel using rock hammers with the samples being transferred and stored in clear plastic or spunbonded olefin bags. Rock sample sizes were between 1 and 3 kg. The sample bags were tied using cable ties, flagging tape or string. A sample identifier was written on the outside of each bag (on both sides or top and bottom). All relevant information was recorded in field books and sample cards, and a sample number metal tag and flagging tape was left to mark the sample site location. GPS locations of each sample were recorded in the field, using a handheld GPS.

All rock samples were transported to Graphite One's Salmon Lake Camp for sample and shipping preparation. The samples then placed within larger poly woven (rice) bags for shipping by truck to the sample preparation laboratory in Nome, Alaska. Subsequently, the samples were crushed to -150 mesh and pulverized to -80 mesh and sent to Activation Laboratories Ltd. ("Activation" or "Actlabs") in Ancaster, Ontario for graphitic carbon analysis using a LECO CR-412 Carbon Analyzer.

Representative samples were also taken at each sample location. These were roughly 0.5 kg samples that were placed in clear plastic or spunbonded olefin bags, closed using cable ties, flagging tape or string. Representative samples were placed in rice bags, labelled as “Representatives”, and shipped by truck and sent to the sample preparation laboratory in Nome, Alaska where they remain in archive.

11.2 Drill Core Collection

Core was delivered to camp by air, where it was palletised, loaded onto the flatbed truck, and driven to Graphite One’s warehouse in Nome for processing, which includes: geotechnical logging, core logging, core photography, core splitting, core sampling and preparation for the prep lab. All measurements were recorded directly into the logging spreadsheet.

Sample intervals were roughly 1 m in length starting from the upper bedrock contact. Sampling did not cross lithological boundaries; rather a shorter sample was taken going downhole to the lithological contact followed by a new sample on the downhole side of the contact.

Drill cores were split perpendicular to the foliation using manual wheel driven core splitters with a 4 inch blade. Half of the core was put into a plastic sample bag with the sample number written on both sides, the other half of the core was placed back in the core box. A number tag was placed into the sample bag, checked to make sure that the tag number matches the number on the bag, and then sealed with a cable tie.

Blank samples were included every 10 samples using approximately a cup of pre-crushed material. Duplicate samples were sampled by taking the half core left in the box and splitting it again to obtain a quartered core sample of which one quarter core is bagged and put into the sample stream, and the other quarter is returned to the core box. Sample blanks and duplicates are described in detail in the ‘Data Verification’ section.

All samples were then laid out in order for processing at Graphite One’s on-site sample preparation lab, which was supervised by personnel from Activation Laboratories Ltd.

11.3 Activation Laboratories Ltd. On-Site Sample Prep Lab

The samples were hand delivered by APEX personnel to the onsite preparation lab, which was operated by personnel from Activation Laboratories Ltd., an ISO 17025 certified analytical laboratory. The objective of the prep lab in Nome, Alaska was to dry, crush and package all rock and drill core samples for shipping, via commercial carrier, from Nome to Activation Laboratories Ltd. in Ancaster, ON, for analysis.

The crusher was continually cleaned using river rock and high-pressure air. At the start of every sample batch, a sieve test was done on the first sample where approximately 100 g of milled sample was sieved through a 150 mesh sieve until 95% of the sample passes in order to determine the proper milling time.

All samples were run through a Boyd Jaw Crusher. Samples were riffle split down to 100 g portions to be pulverized in an ESSA LM2 miller ring and puck pulverizer. The milling bowls had sealed gasket lids to avoid contamination that could be associated with, for example, ventilation. The milled (pulverized) sample (the 'pulp') was split into a 10 g portion, placed into labeled bags and sent to the Activation Laboratories Ltd. facility in Ancaster, Ontario for testing. In between samples, the milling bowls were cleaned out with cleaning sand for approximately 20 seconds. High graphite samples were followed up with river rock and air guns to prevent contamination with low graphite samples.

Production duplicates were done every 50 samples where the reject was split twice into 100 g samples and milled separately while the pulp duplicates were done every 30th sample by splitting the milled pulp into two equal portions.

11.4 Sample Shipment, Chain of Custody and Analysis

Shipping of the pulp samples from Graphite One's sample preparation lab in Nome was conducted by Activation Laboratories Ltd. personnel. Security tags that comprised identifiers other than drillhole names and/or sample coordinates were used to seal the sample bags. The identical sample numbers, which were originally recorded in the field, were continued all the way to Activation Laboratories Ltd. in Ancaster, Ontario to complete the chain of custody. Similarly, metallurgical samples for flake-size testing were sent to Hazen Research Inc., in Golden, CO.

Once the samples arrived at Activation Laboratories Ltd., they remained in the custody of the independent lab until final processing was completed. Activation Laboratories Ltd. has achieved the ultimate accreditation to international standards, the ISO 17025 standard. Hazen Research also holds several professional accreditations.

2011 and 2012 samples were analyzed for total graphitic carbon. In general, total graphitic carbon content is determined in dried sediments using a LECO CR-412 Carbon Analyzer. The pulverized rock/core material is combusted in an oxygen atmosphere and any carbon present is converted to CO_2. The sample gas flows into a non-dispersive infrared (NDIR) detection cell. The NDIR measures the mass of CO_2 present. The mass is converted to percent carbon based on the dry sample weight. The total organic carbon content is subtracted from the total carbon content to determine the total inorganic carbon content of a given sample.

Graphite One grab and drill core samples were subjected to the following analytical procedure. A 0.5 g pulp sample is either digested with hydrochloric and perchloric acids, or subjected to a multistage furnace treatment to remove all forms of carbon with the exception of graphitic carbon. The residue is vacuum-filtered and dried. Accelerator material is added to the dried filter. The inductive elements of the sample and accelerator couple with the high frequency field of the induction furnace. The pure oxygen environment and the heat generated by this coupling cause the sample to combust.

During combustion, carbon-bearing elements are reduced, releasing the carbon, which immediately binds with the oxygen to form CO and CO_2, the majority being CO_2. Carbon is measured as carbon dioxide in the IR cell as gases flow through the IR cells. Carbon dioxide absorbs IR energy at a precise wavelength within the IR spectrum. Energy from the IR source is absorbed as the gas passes through the cell, preventing it from reaching the IR detector. All other IR energy is prevented from reaching the IR detector by a narrow bandpass filter. Because of the filter, the absorption of IR energy can be attributed only to carbon dioxide (CO_2). The concentration of CO_2 is detected as a reduction in the level of energy at the detector.

In addition to total carbon, eight samples collected by the author during a 2012 site visit were analyzed using Activation Laboratories Ltd. Code 1C-OES (Fire Assay ICP-OES), Code 1E-Ag (Aqua Regia) and Code 5G C&S. A 30 g aliquot is used for 1C-OES fire assay method. The sample is mixed with fire assay fluxes (borax, soda ash, silica, litharge) and with silver (Ag) added as a collector and the mixture is placed in a fire clay crucible, the mixture is preheated at 850° C, intermediate 950° C and finish 1060° C. The entire fusion process should last 60 minutes. After cooling, the lead button is separated from the slag and cupelled at 950° C to recover the silver (Ag) doré bead plus gold (Au), platinum (Pt), and palladium (Pd). Detection limits are presented in Appendix 2.

The Ag doré bead is digested in hot (95° C) HNO_3 + HCl. After cooling for 2 hours the sample solution is analyzed for Au, Pt and Pd by ICP/OES using a Varian 735 ICP. A blank and a digested standard are run every 15 samples. The Instrument is recalibrated every 45 samples. Duplicates are run when sample duplicates are received by the ICP/MS department at Activation Laboratories Ltd.

For detection of Ag the 1E-Ag method was used in which a 0.5 g aliquot of sample is digested with aqua regia for 2 hours at 95° C. The sample is cooled then diluted with deionized water and homogenized. The samples are then analyzed using a Varian Vista ICP(Activation Laboratories Ltd.). Detection limits are shown in Appendix 2. A series of USGS geochemical standards are used as controls. This digestion is near total for base metals however will only be partial for silicates and oxides.

The 5G - Carbon and Sulphur/Metallurgical Balance method was used to determine total Carbon (C) and sulfur (S) along with graphitic C, organic C, CO_2, and SO_4. Detection limits are shown in Appendix 2. Total carbon and sulphur are determined on an ELTRA CS 2000 Carbon Sulphur Analyzer. A weighed sample is mixed with iron chips and a tungsten accelerator and is then combusted in an oxygen atmosphere at 1370°C. The moisture and dust are removed and the CO_2 gas and SO_2 gas are measured by a solid-state infrared detector (Activation Laboratories Ltd.). CO_2 is determined by digestion with 2N perchloric acid and the dissolved CO_2 is titrated using a UIC coulometer (Activation Laboratories Ltd.). The separate sample is ignited at 600°C in order to drive off the CO_2 and the organic carbon. The remaining C is graphitic carbon which is analyzed as above.

Organic carbon is determined by the difference after subtracting the above species. Sulphide sulphur is determined by calculating remaining sulphur after sulphate sulphur is subtracted from total sulphur. Sulphate sulphur is determined by roasting at 850°C to drive off the sulphide sulphur with analysis of the sulphur in the roast residue. This is converted to sulphate by calculation at Activation Laboratories Ltd.

A total of seven samples (three in 2011 and four in 2012) were sent to Hazen Research, Inc. for analysis and graphite flake characterization. Hazen holds certifications from various state regulatory agencies, from the USEPA, and participates in evaluation studies as a means of demonstrating competence in the areas of certification.

The three 2011 samples visually contained: 1) high-grade massive; mixed high-grade and disseminated; and disseminated graphite. The samples yielded 56.9%, 14.5% and 9.2% graphite, respectively. Samples were iteratively crushed and screened and found to contain 84.3%, 93.6% and 76.5% large flake graphite (being defined as flake size greater than 80 mesh in one dimension).

In 2012, four samples from drill core were selected for testing for flake size distribution. The samples which were from drillholes 12GC001, 12GC004, 12GC003 and 12GC005 and yielded 8.7%, 13.7%, 14.9% and 8.0% graphite, respectively. Samples were iteratively crushed and screened and found to contain 62.9%, 70%, 63.9% and 59.3% large flake graphite, respectively. However, the authors believe these results are understated as Hazen did not capture any plus 10 mesh material which is known to contain up to 10.5% large flake from previous samples.

A fifth 2012 drill core sample collected for flake size distribution measurement was analyzed using the Mineral Liberation Analyzer at Activation Laboratories Ltd. The sample contained 6.68 wt. % graphite, and most of the graphite occurs as liberated, free graphite. Fifty per cent of the graphite from this sample is plus 120 µm with approximately 15 wt. % of the graphite having a plus 40 mesh size with a small portion (0.13 wt. %) classifying within the 6.8 to 9.6 mesh range.

The authors were not present for the collection of every bedrock and/or core sample, however to the best of our knowledge, the sample preparation, security and shipment employed the proper quality assurance actions to provide adequate confidence in the data collection and estimation process. The bedrock and core sampling program was carried out by APEX Geoscience Ltd. staff that are independent of Graphite One Resources Inc. The sample methodology included collection of representative samples, inclusion of random blank samples, pre-laboratory sample preparation and crushing (controlled by Activation Laboratories Ltd.), production duplicates, sample security tags and tracked sample shipment, all of which meet the industry standards for accuracy and reliability. The analysis was completed at certified analytical laboratories and there is no reason to doubt the validity of the analytical or testing laboratories.

12 Data Verification

12.1 Data Verification

Data collected during the 2012 surface sampling and diamond drilling program were checked for veracity on site by APEX personnel. In the event of data errors, onsite APEX drill geological and core logging managers were notified such that the original data was corrected onsite. The results of assay blanks, duplicate samples, lab repeat assays and standards were checked to ensure results were within acceptable limits. The drillhole database was also validated. Data validation and QA/QC procedures and results were completed independently by R. Eccles, P.Geol., of APEX and is discussed in the following text.

All 2011 and 2012 laboratory certificates are presented in Appendix 2. Once assays were received from Activation Laboratories Ltd., the data were loaded into MICROMINE in their original format (in order to avoid any translational errors) for geological modeling and interpretation conducted by S. Nicholls, MAIG, of APEX prior to resource estimation.

12.2 Quality Control Procedures

12.2.1 Sample Stream Assay Checks

Assay Blanks: One blank was inserted into the assay stream for every 10 core samples submitted. Blanks were inserted directly after highly mineralized samples to test for contamination during the preparation. Three separate blank materials were used and had an influence on the quality control results as discussed in the text below.

Duplicate Samples: Duplicate samples include ¼ drill core splits and were submitted as two separate samples with consecutive sample numbers. One duplicate sample was inserted for every 20 samples.

Lab Repeat Assays: A good measure of the laboratory precision, as opposed to absolute accuracy, and sample variability is to examine repeat assays. These assays are conducted on a separate sample taken from the same pulp as the original assay and analyzed with the same technique. Thus, original results should be duplicated only if there is good homogenization of the pulp and good laboratory precision.

Lab Standards: Activation Laboratories Ltd. use standard quality assurance and control policies in all aspects of laboratory operations. The programs were developed from guidelines published by the International Standards Organization ("ISO") commonly referred to as ISO\IEC17025 Guidelines. Activation Laboratories Ltd. uses 5 different masses of EDTA as well as 99.9% pure graphite as internal Quality Control (QC). These are used at a 10% frequency. Activation Laboratories Ltd. also uses a 10% sample duplicate frequency.

12.2.2 Quality Control Results

Time series charts for standards and blanks, and X-Y scatter plots for duplicate samples are presented in Figures 17 and 18, respectively. With the exception of the Graphite One standard blanks, the complete chronological history of standards shows that the standard blanks and laboratory standards generally meet the "pass-criteria" plotting within two-standard deviations (2 SD) of the mean. The notable exception occurs in Figure 17a, where a subset of Graphite One standard blank data from 8-Aug-2012 to 20-Aug-2012 "fails" by plotting outside three-standard deviations (3 SD) of the mean.

This set of failed results can be explained by variations in the Graphite One standard blank material being used. Initially, Graphite One used a quartz cobble obtained from Alberta (this standard has been used by APEX in several previous projects and is well documented as not containing any graphite). The quartz cobble standard returned good values to August 3rd when the material was entirely consumed. Graphite One then sourced a blank that was sourced locally from a nearby outcrop of marble.

Figure 17. Time series charts for Graphite One standard blanks, laboratory standard method blanks and laboratory standards. Figure 17a includes the chronological use of different standard materials (at the top).

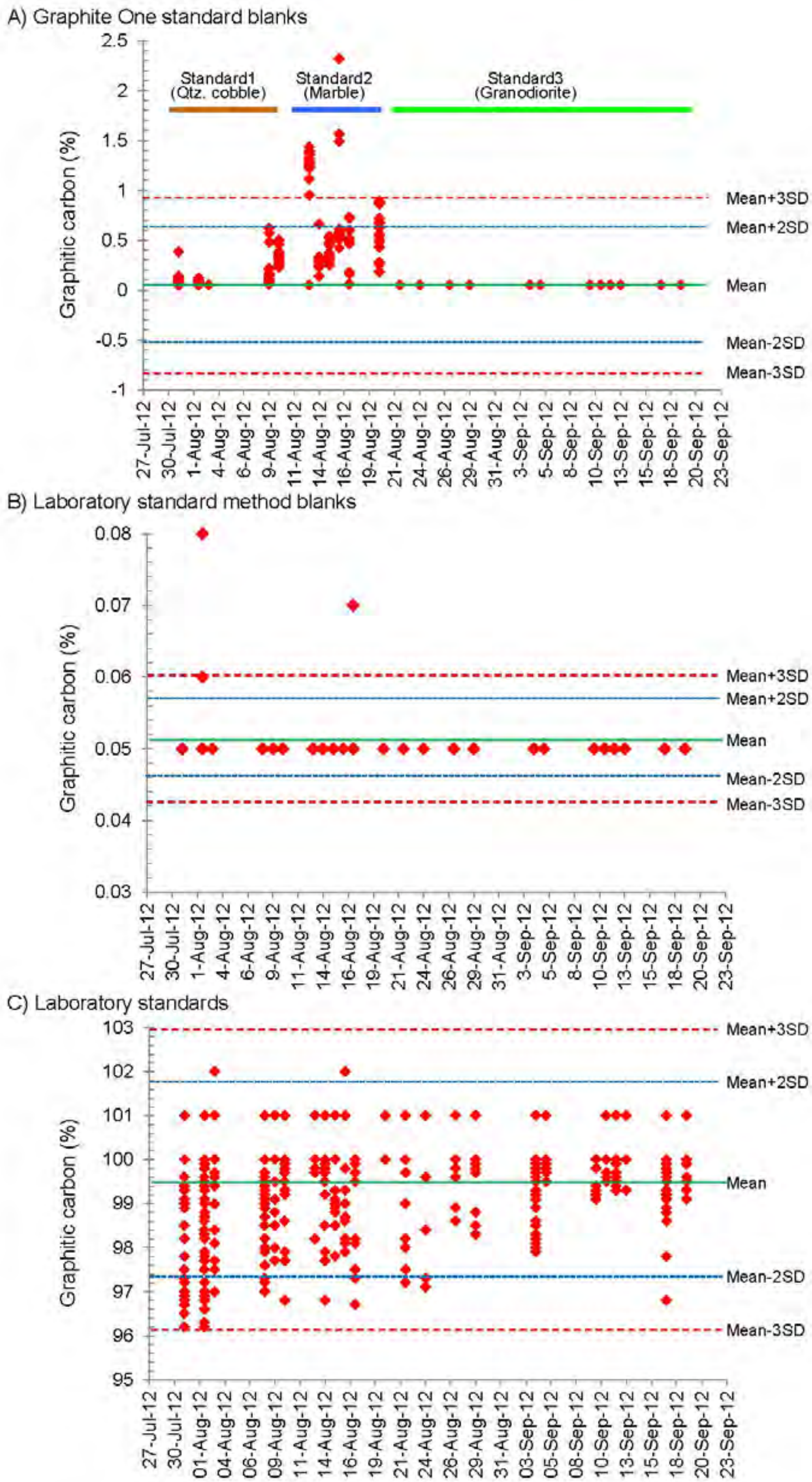
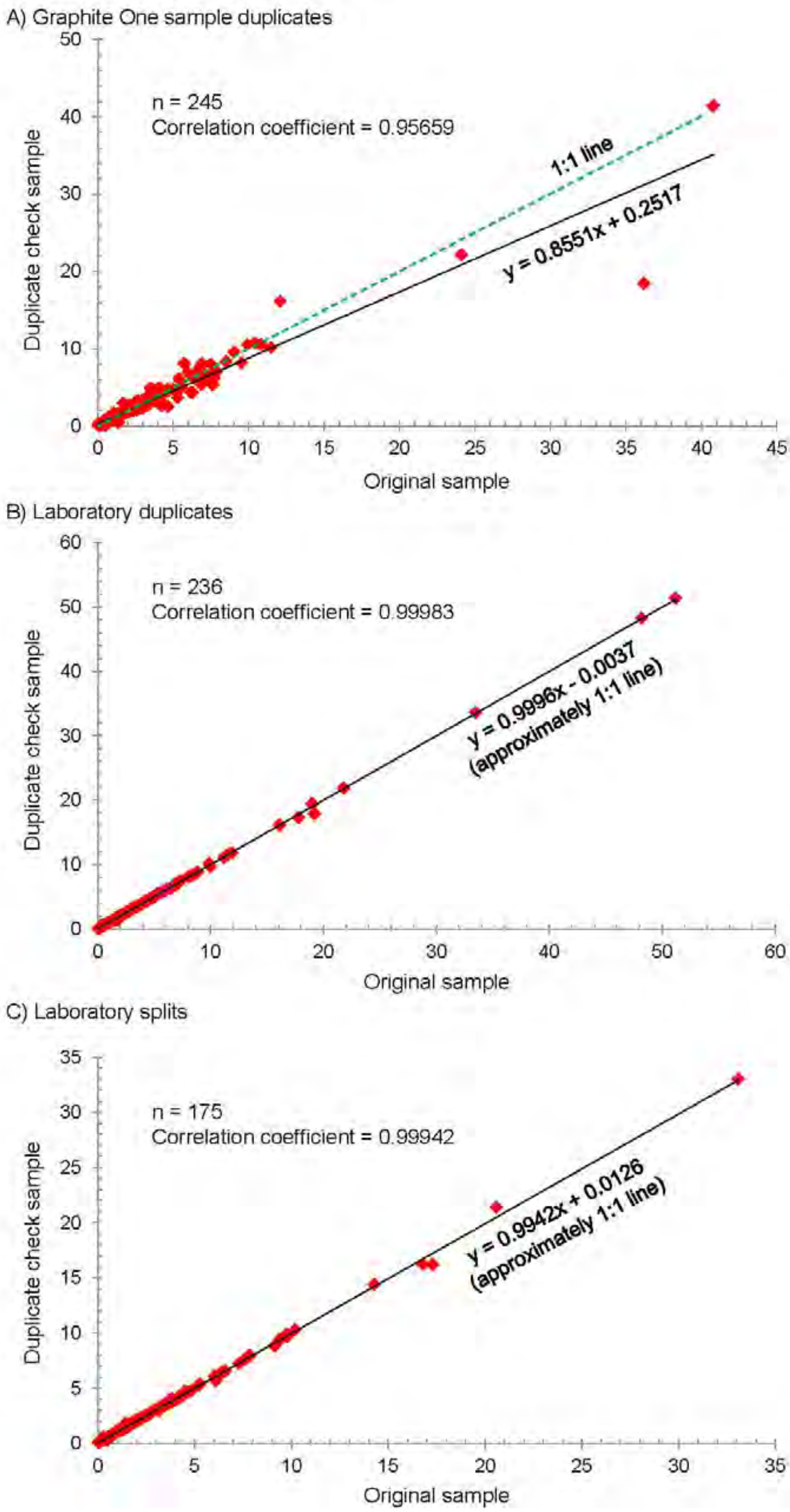


Figure 18. X-Y scatter plots for Graphite One and laboratory sample duplicates.



When assayed, the marble standard values came back above the lower limit of graphite detection. The marble standard was then assayed separately twice and these results also came back above graphite detection despite there being no visible graphite in the sample. At this time, August 20th, the prep lab was cleaned to avoid contamination and the Graphite One standard blank was switched to a new source, the Cape Nome granodiorite. From August 20th on, the granodiorite blank provides a time series that is near or equal to the mean value.

The laboratory standard method blanks exhibit a few outliers on the time series chart, but predominantly plot directly adjacent to the mean value (Figure 17b). Laboratory standards are generally within 2 SD and generally improve over the duration of the drill program. Graphite One sample duplicates, laboratory duplicates and laboratory splits exhibit good to excellent 1:1 ratio with correlation coefficients of between 0.95659 to 0.999683 (Figure 18).

12.3 Data Verification and Quality Control Conclusion

The analysis of the results of assay blanks, duplicate samples, lab repeat assays and standards indicate that the assay process employed during Graphite One's 2012 exploration campaign produced valid results. The assay blanks show that there has been no contamination in the preparation or assay process. Assay results for the duplicate samples and lab repeat assays confirm the values in the original assays. It is the conclusion of R. Eccles, P.Geol., that the 2012 sampling and assaying program employed by APEX and the certified laboratories on the Graphite Creek Property produced sample information that meets industry standards for accuracy and reliability. The assay results are, therefore, sufficiently accurate and precise for use in resource estimation and for the release of drillhole results on a hole by hole basis.

13 Mineral Processing and Metallurgical Testing

To date, Graphite One has conducted 2011 and 2012 studies at Hazen Research In and Activation Laboratories Ltd. to document the graphite size distribution by screen analysis and Mineral Liberation Analyzer (MLA), as well as document the characteristics of graphite and modal mineralogy in each individual screen fraction by optical examination, and determine the major constituents of the graphitic schist samples by x-ray diffraction (XRD) analysis.

In addition, Graphite One completed a preliminary graphite separation test, which was conducted by Hazen Research, Inc. The objective of this work was to make a graphite concentrate at bench scale using different separation methods.

13.1 Physical Graphite Flake Properties

13.1.1 2011 Flake Size Distribution and Petrographic Examination

Visual observation of hand samples shows that the graphite at the Property is coarse (over 1 mm across) and crystalline. Disseminated graphite in the schist occurs as bright, silvery metallic, platy grains oriented parallel to the foliation. Masses of high-grade graphite are also coarse but the character of individual mineral grains within them is not readily apparent by visual observation.

Three (15 kg) composite grab samples of high-grade, disseminated, and mixed disseminated and high-grade graphite samples were taken to quantitatively characterize the graphite by laboratory screen analysis and petrographic examination (Hudson, 2011). The samples included: 1) a high-grade graphite sample from an old stockpile at Christophosen Creek; 2) a mixed sample of disseminated and massive graphite; and 3) a disseminated graphite sample from a surface excavation on the west side of Graphite Creek.

The high-grade, mixed-grade and disseminated graphite samples contained 56.9, 14.5, and 8.2% graphite respectively (Table 13). Screening analyses of 2011 samples that were crushed to -10 mesh shows that contain 84.3%, 93.6% and 76.5% large flake graphite (being defined as flake size greater than 80 mesh in on dimension; Hudson, 2011; Table 13).

Petrographic examination of the 10 to 40 mesh fraction from the disseminated graphite sample consists of siliceous gangue (mostly quartz) with minor amounts of micas, magnetite, ilmenite and titanium oxides. Graphite is abundant, varies between a few microns to about 1.5 mm in its longest direction, yet averages about 150-250 microns (µm), and consists of lath-shaped particles with deformed or foliated texture, liberated crystals and intergrowths with other constituents.

13.1.2 2012 Flake Size Distribution and X-Ray Diffraction Analysis

During 2012, five composite samples were collected from drill core by sampling quarter splits of core continuously from starting depth until approximately 5 kg of material was collected. Four of five composite samples were sent to Hazen Research, Inc. (“Hazen”), in Golden, CO and one sample was sent to Activation Laboratories Ltd. in Thunder Bay, Ontario for processing.

The objectives of the study were to: 1) determine the size distribution of the graphite by screen analysis and Mineral Liberation Analyzer; 2) characterize the graphite in each individual screen fraction by optical/ Mineral Liberation Analyzer examination; and 3) determine the major constituents of the samples by x-ray diffraction (XRD) analysis/Mineral Liberation Analyzer.

At Hazen, the four samples were stage-crushed to minus 10 mesh, and as a result, the study did not capture the plus 10 mesh flake distribution from drill core.

In 2012, five samples from drill core were selected for testing for flake size distribution and/or a Mineral Liberation Analyzer (MLA) test. Four of the samples were sent to Hazen and one sample was sent to Actlabs in Thunder Bay, ON.

The samples which were sent to Hazen were from drillholes 12GC001, 12GC004, 12GC003 and 12GC005 yielded 8.7%, 13.7%, 14.9% and 8.0% graphite, respectively. Samples were iteratively crushed and screened and found to contain 62.9%, 70%, 63.9% and 59.3% large flake graphite, respectively (Table 14). However, the authors believe these results are understated as Hazen did not capture any plus 10 mesh material which is known to contain up to 10.5% large flake from previous samples (see Table 13, “Plus 10” mesh size fraction).

A fifth 2012 drill core sample collected for flake size distribution measurement was analyzed using the Mineral Liberation Analyzer at Activation Laboratories Ltd. The sample contained 6.68 weight per cent (wt. %) graphite, and most of the graphite occurs as liberated, free graphite. Fifty per cent of the graphite from this sample is plus 120 µm with approximately 15 wt. % of the graphite having a plus 40 mesh size with a small portion (0.13 wt. %) classifying within the 6.8 to 9.6 mesh range.

Table 13. Graphite fraction sizes from high-grade, disseminated, and mixed high-grade and disseminated samples collected from the Graphite Creek Property during 2011 (Hudson, 2011).

Size, mesh	Weight		Graphite in sample		Flake graphite (%)
	(g)	(%)	(%)	(g)	
High-grade graphite from Christophosen Creek, 470873E, 7211388N, Z3, NAD83					
Plus 10	89.5	9.1	50.4	45.1	8.1
10 by 40	566.3	57.5	55.9	316.5	56.7
40 by 80	177.3	18.0	61.5	109.1	19.5
80 by 100	31.5	3.2	64.3	20.3	3.6
100 by 200	43.7	4.4	61.8	27.0	4.8
Minus 200	76.5	7.8	53.2	40.7	7.3
Total Calculated Head	**984.8**	**100.0**	**56.7**	**558.7**	**100.0**
Assayed Head			**56.9**		
Disseminated graphite from Graphite Creek, 474645E, 7212881, Z3, NAD83					
Plus 10	11.8	1.3	9.5	1.1	1.5
10 by 40	630.0	71.1	7.5	47.3	64.3
40 by 80	68.6	7.7	11.5	7.9	10.7
80 by 100	21.4	2.4	10.4	2.2	3.0
100 by 200	63.2	7.1	11.0	7.0	9.5
Minus 200	90.9	10.3	8.9	8.1	11.0
Total Calculated Head	**886.0**	**100.0**	**8.3**	**73.5**	**100.0**
Assayed Head			**8.2**		
Mixed high-grade graphite and disseminated graphite from Graphite Creek, 474645E, 7212881, Z3, NAD83					
Plus 10	128.6	11.8	14.1	18.1	10.5
10 by 40	719.7	66.0	15.0	108.0	62.8
40 by 80	181.2	16.6	19.3	35.0	20.3
80 by 100	11.5	1.1	17.9	2.1	1.2
100 by 200	20.4	1.9	17.4	3.5	2.1
Minus 200	29.7	2.7	17.6	5.2	3.0
Total Calculated Head	**1091.1**	**100.0**	**15.7**	**171.9**	**100.0**
Assayed Head			**14.5**		

Large flake graphite (greater than 80 mesh)

The size of the graphite in the 10 to 40 mesh fraction varies between approximately 20 and 1,500 µm in the long dimension with an average size of about 50 to 200 µm (Hazen Research, Inc., 2012). The graphite occurs mostly as liberated flakes/crystals in the minus 40 mesh fractions for all four samples and can occur together with less common intergrowths of graphite and other gangue schist components (quartz, mica and other siliceous materials and iron oxides).

In general, all samples consist mainly of quartz, with minor amounts of mica, clay, magnetite, ilmenite, and titanium oxides. The graphite is present as: minute scales or flakes; fine, undulated stringers along schist planes; liberated lath-shaped or tabular-foliated crystals; or as blocky and irregular deformed particles (Hazen Research, Inc., 2012).

The fifth composite sample was analyzed at Activation Laboratories Ltd. (Phung and Bindi, 2012). The bulk sample was crushed to minus 2 mm. A Jones Riffle splitter was used to split 500 g of sample for the MLA study. The 500 g sample was further screened to plus106/minus 850 µm. Subsequently representative splits of 1.12 g and 1.09 g were taken using a Quantachrome Mini-riffler, and each mixed with 2.5 g of carnauba wax. Two polished sections were prepared and analyzed using the Mineral Liberation Analyser; a quantitative mineralogical technology that combines the scanning electron microscope (SEM) with energy dispersive spectrometry (EDS).

The sample contains 6.68 wt. % Cg. Mineral 'mapping' on the Mineral Liberation Analyzer shows that most of the graphite flakes/crystals/particles occur as free (liberated) graphite. The graph in Figure 19 shows that 50% of the graphite passes through 120 µm (D50) and 80% passes through 330 µm (D80; Figure 19).

Figure 19. Cumulative size distribution of graphite flakes from sample 12GPHFL004 (drillhole 12GCH005, 6.13-25.00 m).

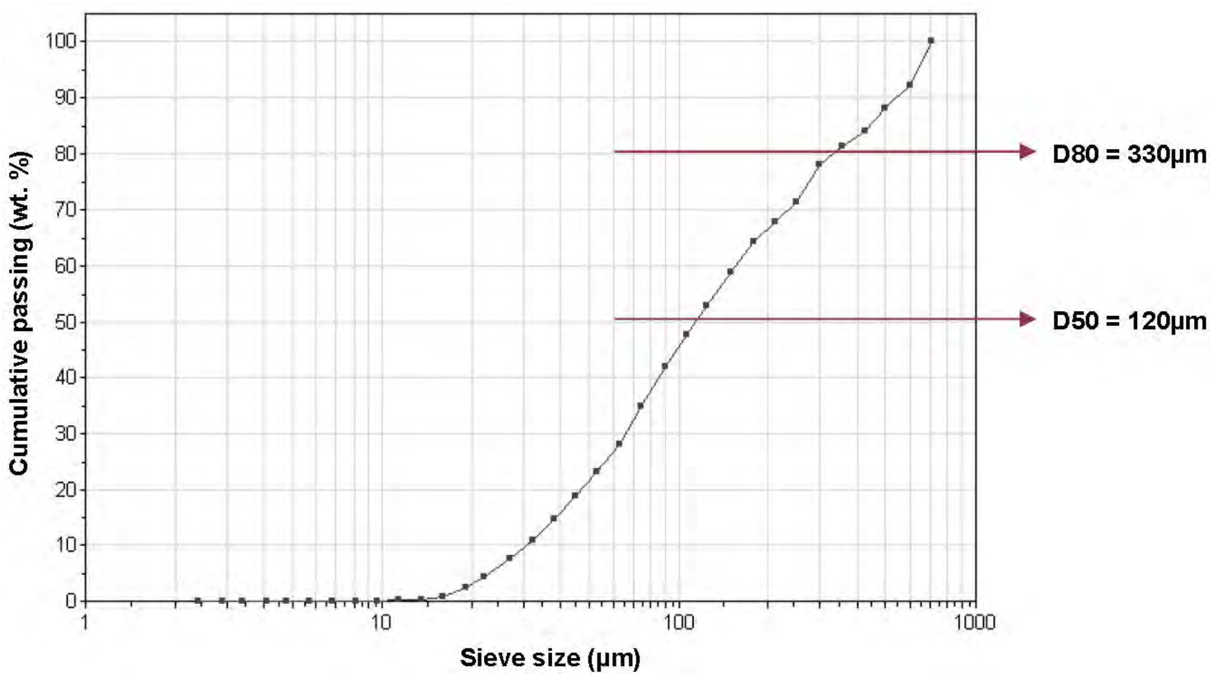


Table 14. Graphite fraction sizes from drill core material collected during the 2012 drill program.

Size, mesh	Weight (g)	Weight (%)	Graphite in sample (%)	Flake Graphite (%)
Sample 12GPHFL001, drillhole 12GC001 (17.13-22.03 m)				
10 by 40	505.9	51.5	7.3	42.2
40 by 80	188.7	19.2	9.6	20.7
80 by 100	23.9	2.4	12.7	3.5
100 by 200	103.8	10.6	13.7	16.3
Minus 200	160.2	16.3	9.4	17.3
Total Calculated Head	**982.5**	**100.0**	**8.9**	**100.0**
Assayed Head			**8.7**	
Sample 12GPHFL002, drillhole 12GC004 (21.00-27.00 m)				
10 by 40	520.2	54.4	12.7	48.7
40 by 80	190.8	19.9	15.2	21.3
80 by 100	33.3	3.5	21.1	5.2
100 by 200	91.4	9.6	16.3	11.0
Minus 200	120.8	12.6	15.5	13.8
Total Calculated Head	**956.5**	**100.0**	**14.2**	**100.0**
Assayed Head			**13.7**	
Sample 12GPHFL003, drillhole 12GCH004 (5.97-10.85 m)				
10 by 40	435.4	43.7	13.0	38.9
40 by 80	241.9	24.3	15.0	25.0
80 by 100	34.5	3.5	16.4	3.9
100 by 200	111.7	11.2	15.8	12.2
Minus 200	173.7	17.4	16.7	20.0
Total Calculated Head	**997.1**	**100.0**	**14.5**	**100.0**
Assayed Head			**14.9**	
Sample 12GPHFL005, drillhole 12GC006 (13.97-22.00 m)				
10 by 40	410.0	43.2	6.7	35.8
40 by 80	199.1	21.0	9.1	23.5
80 by 100	39.1	4.1	13.7	6.9
100 by 200	80.3	8.5	8.4	8.7
Minus 200	219.6	23.2	8.8	25.1
Total Calculated Head	**948.1**	**100.0**	**8.2**	**100.0**
Assayed Head			**8.0**	

Large flake graphite (greater than 80 mesh)

13.2 Preliminary Graphite Separation Tests

The Graphite Creek graphite showings have undergone brief historical metallurgical testing. In 1985, Hazen Research, Inc. ("Hazen") undertook an analysis of seven samples taken from the Graphite Creek Property area. These were commissioned by the Alaskan Division of Geological and Geophysical Surveys, based out of Fairbanks, Alaska. The analysis included sample preparation by crushing followed by x-ray diffraction (XRD) and chemical analysis (Bentzen, 1995). The XRD mineralogical results returned values ranging from 18% to 50% graphite (approximate weight percentage). In contrast, the XRD mineralogical results are 8.1% to 45.8%. Hazen could not properly ascertain the reason for the difference between the two results. Hazen also could not properly determine the chemical quality or the particle size of the graphite flakes. Hazen did recommend clearing up this discrepancy regarding the weight percentage, chemical quality and the particle size. They concluded that even with the difference in the weight percentages there was a high enough amount of graphite that warrants further investigation. In addition, they recommended a beneficiation project to properly characterize the deposit and provide further information as to the recoverability of the graphite (Bentzen, 1995).

Hazen Research, Inc. undertook a second metallurgical test in 2011 for Graphite One (then Cedar Mountain). The primary focus was to determine the best separation method for concentration upgrades. They focused on two methods, a gravity separation method and a flotation method of the split (40 and 80 mesh; Londono, 2012). Hazen reported that gravity separation resulted in a 91.7% concentrate, which was consistent with a flotation method result of 92%. Both results were below their bench scale of 95%, which they attributed to impurities within the graphite flakes; however, a mineralogical examination was not done at this time (Londono, 2012). Both metallurgical tests were compromised by a lack of sufficient sample size, and larger sample sizes were recommended if and when further testing is undertaken.

14 Mineral Resource Estimate

The calculation of the mineral resources estimation of the Graphite Creek graphite showings for Graphite One has been completed by Mr. C. Duplessis, Eng., who is a Senior Consultant for SGS Canada Inc., and he is an independent Qualified Person under NI 43-101, using the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") Standards on Mineral Resources and Reserves, Definitions and Guidelines.

It should be understood that mineral resources which are not mineral reserves do not have demonstrated economic viability. The mineral resources presented in this Technical Report are estimates based on the available sampling and on assumptions and parameters available to the authors. The comments in this Technical Report reflect the author's best judgement in light of the information available.

The mineral resource in this Technical Report has been calculated from a computerized block model. The construction of that model is based on the input of drillhole data, which serve as the basis for the definition of 3D mineralized envelopes with which the quantity of the resources are limited to. Only the drillhole samples within the mineralized envelopes in the form of fixed length composites are used to interpolate the grade of regularized blocks within the mineralized envelopes. All the interpolated blocks below the overburden/bedrock contact and within the mineralized envelopes make the mineral resources and have been classified according to the proximity to the drillhole composites and corresponding precision/confidence level. Surface samples have not been used in the resource estimation.

14.1 Site visit

Mr. C. Duplessis, visited the site between October 30th and November 2nd 2012. The personal inspection was positive; the work sites were clean and well maintained, organisation and work process was up to international standards and best practices. Graphite One has installed a permanent exploration-preparation laboratory warehouse at Nome. The 2012 drilling was carried out using a temporary exploration camp, but has since been removed from the Graphite Creek deposit in accordance to regulations. The workers live in temporary tent camp (Salmon Lake Camp) during exploration campaigns. At the Nome facilities, the drill core is split with a manual rotary splitter and the remaining witness core is cross-piled on wooden pallets and stored into sea containers (Figure 20). The site is constantly monitored.

Figure 20. Photographs of the warehouse facility (core storage and prep lab).

Warehouse and core logging facility in Nome

Core boxes on wood pallet in container

Preparation facility inside warehouse

Core cutting facility with manual splitter

As per regulation (no trace), all drill sites have to be rehabilitated to original conditions, as such there are no marker or wooden stakes identifying the drillhole numbers in the field, only the topography shows there has been a drill site. One wooden drill platform was still on site. The author Mr. Duplessis was able to locate two drillhole sites and verify their location using a hand held GPS near Graphite Creek. These drillholes that were visited had a GPS position consistent with that recorded in the database. SGS is satisfied with evidence of exploration on the site and has no reason to doubt the authenticity of drillholes (Figure 21).

Figure 21. Photographs of the Property during the site visit.

Drill pad with identified location GPS match

Identified 12GC001map topo & GPS match

Graphite Creek wall looking West

In situ sampling site by SGS looking East

Drill platform orientated uphill for next year drilling

Back to Helicopter with samples

14.2 Data Summary

In order to be able to properly estimate the Graphite Creek resources, C. Duplessis has reviewed and validated the computer modeling and data provided by project geologist S. Nicholls from APEX. Interpretation of the graphitic lodes have been reviewed and modified as per discussions between SGS and APEX.

The mineral resource estimate relied upon new modern analysis of the graphitic carbon (% Cg).

Presently, the diamond drillhole database has a total of 18 usable holes, however, only 17 new holes are used in the resource estimation of the Graphite Creek Maiden Inferred Resource. The 18th drillhole, which represents a step-out drillhole from the resource estimate area, is used for the definition of the potential resources that is presented in "Section 16.1 Potential for a Southwestern Extension of Graphite Mineralization at the Graphite Creek Property" of this report.

The name of the current MS-ACCESS database that was used in the calculation of mineral resources is GPH_oct11.mdb which comprised of a total of 18 drillhole collars for a total of 4,248.84 m drilled. A total of 1,138 down hole surveys, 4,104 specific gravity measurements and 4,406 assays have been collected. There are a total of 321 recorded lithologies that have been recorded.

Figures 22 and 23 show the diamond drillholes that have been color coded according to the percentage of the graphitic carbon from the drillhole analyses.

Figure 22. Plan view of drillholes for resource area.

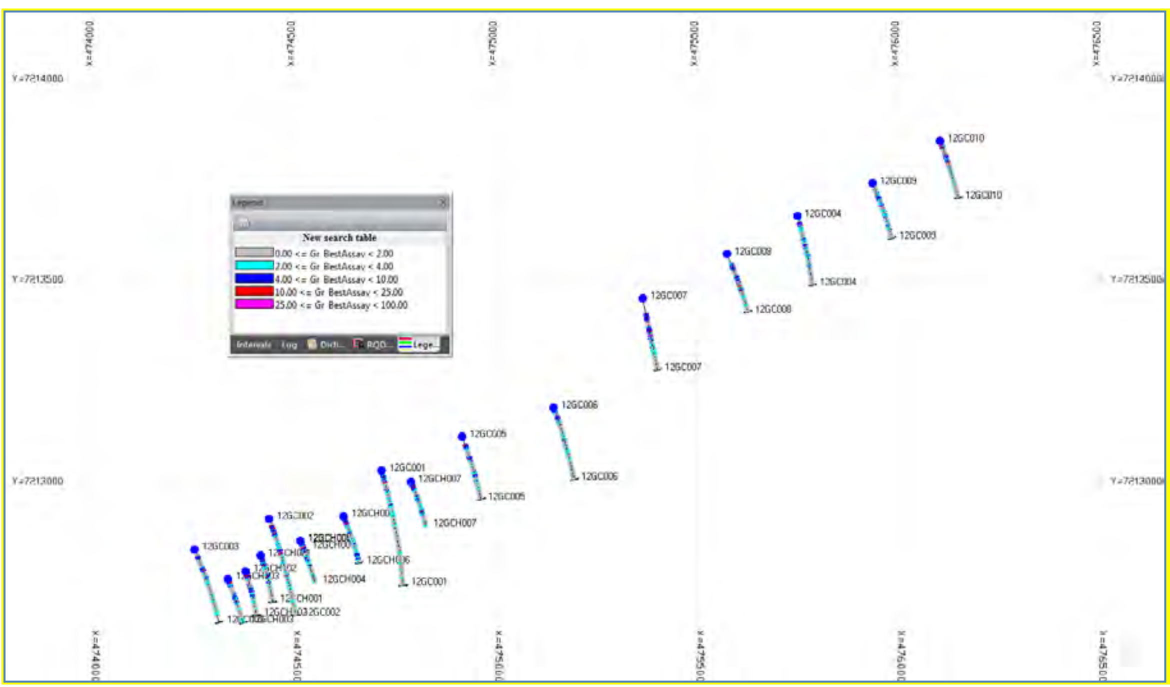
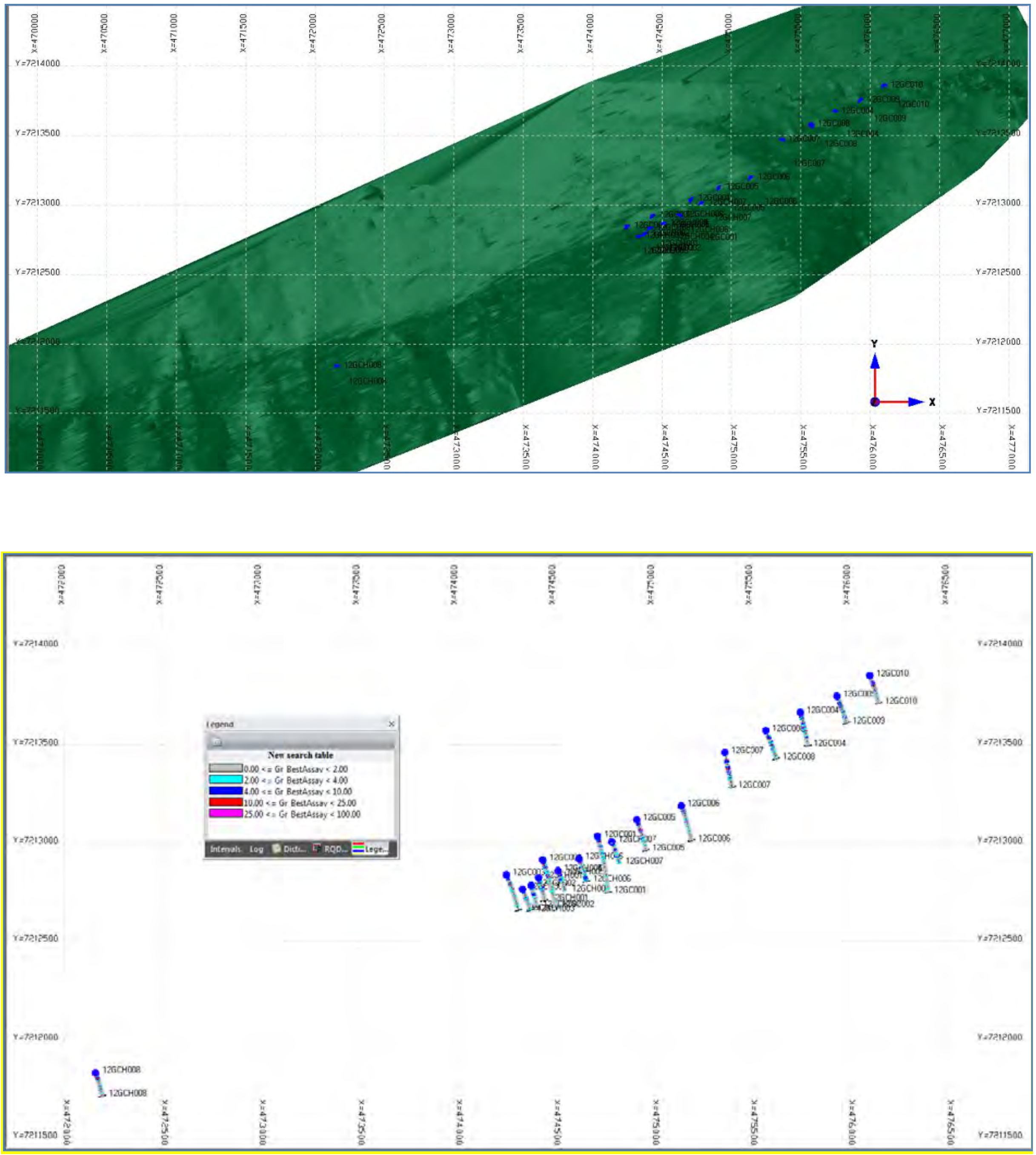


Figure 23: Plan views of the drillholes in GENESIS.



14.3 Additional Assessment of the Data

14.3.1 Additional QAQC

Graphite One completed additional check samples with another laboratory. That is, samples from the 2012 drilling campaign were re-analyzed by Mr. C. Duplessis at ACME Analytical Laboratories Ltd., creating a set of duplicate assays (Table 15).

Comparative statistics were conducted on 246 check samples, comparing the graphitic carbon portion from the original assay (sent to ACTLABS) and the check samples analyzed by ACME in Vancouver.

During the compilation of statistics for comparison data, 5 samples were removed because they came back with a below detection limit value, and 4 samples were removed because the original assays were also below the detection limit and the check assays were near the detection limit. It is important to note that the check assays had a lower reporting detection limit than the original assay and comparing these results added an artefact to the statistics. The author Mr. C. Duplessis is confident removing these samples from the QAQC statistics, they are all non-mineralized samples and the inserted blanks confirm the accuracy of the results.

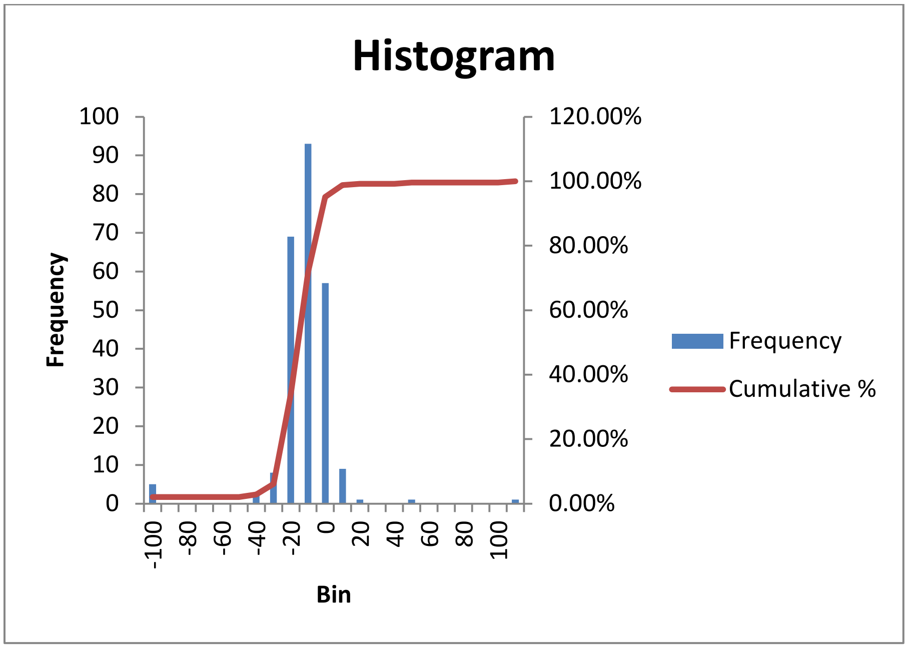
In addition, one further sample was removed where the original assay came back with a below detection result and the check assay came back high. The percent difference is arbitrarily large and due to the fact that the percent difference is larger than sum of all other percent differences, it has the effect of skewing the results of the QAQC analyses. This sample is to be investigated to determine if the sample was mislabelled or if some other error can be found.

Table 15: Summary of duplicate results for additional QA/QC.

Analysis	Count	Original > Duplicate		Original ≤ Duplicate		Relative Mean Difference (%)		
		Count	%	Count	%	Mean	Min	Max
Graphitic Carbon	236	225	95.34	11	4.66	9.97	-14.29	3.09

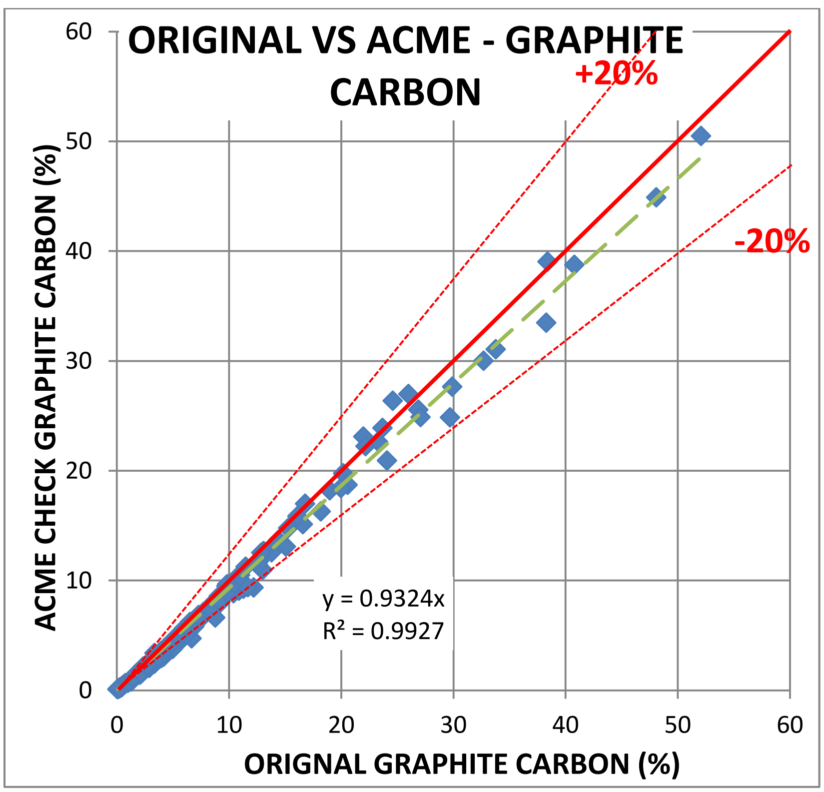
The statistical analysis conducted on the graphitic carbon outlines some significant analytical bias in the data. The duplicate values are lower 95% of the time, the average difference is about 15%. The Relative Mean Difference is ~10%. These results can be explained by variations in laboratory methods and equipment. Furthermore, the relative mean difference is highest for smaller values where is it is difficult to replicate results. The relative mean difference is smaller for the higher grade samples. The relative differences for the minimum and maximum values are small. The following histogram (Figure 24) further visualizes this bias. It illustrates that the bulk of the check samples are between -20% and 0% difference of the original.

Figure 24: Histogram of % difference – check value versus the original.



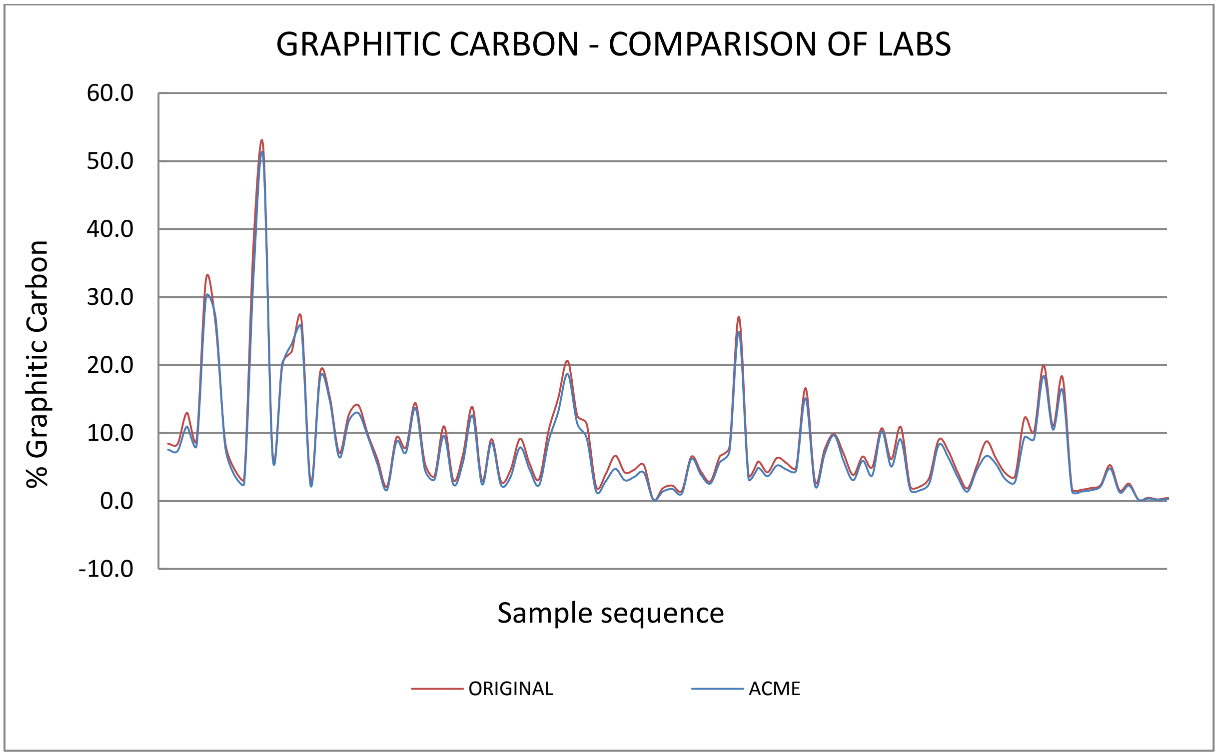
The same analytical results for graphitic carbon are plotted in scatter plots (Figure 25) which show good correlation (R2 value of 0.992) and validate the reproducibility of the analytical results.

Figure 25: Original versus check sample assays - % graphitic carbon.



By plotting both the original and check assay values by sample sequence (Figure 26) we can see that there is a bias on the check results on the low side but like the scatter plot above, the analytical results are consistently similar.

Figure 26: Comparison of labs - % graphite versus sample sequence.



The evidence supports that the original assay values are fit for purpose.

Further analysis was conducted on the data from the check samples, scatter plots of: total carbon versus graphitic carbon (Figure 27); total carbon versus organic carbon (Figure 28); and organic carbon versus graphitic carbon (Figure 29) were created. There is more scatter than desired. The R^2 value for total carbon versus graphitic carbon is 0.992, yet there is a large spread of total carbon values below mean. If total carbon analyses were to be used as a proxy for graphitic carbon analyses this would have the potential to adversely high grade the deposit. Additionally, the spread is more variable between organic carbon and graphitic carbon, and it is a less suitable proxy.

Figure 27: Check samples: % total carbon versus % graphitic carbon.

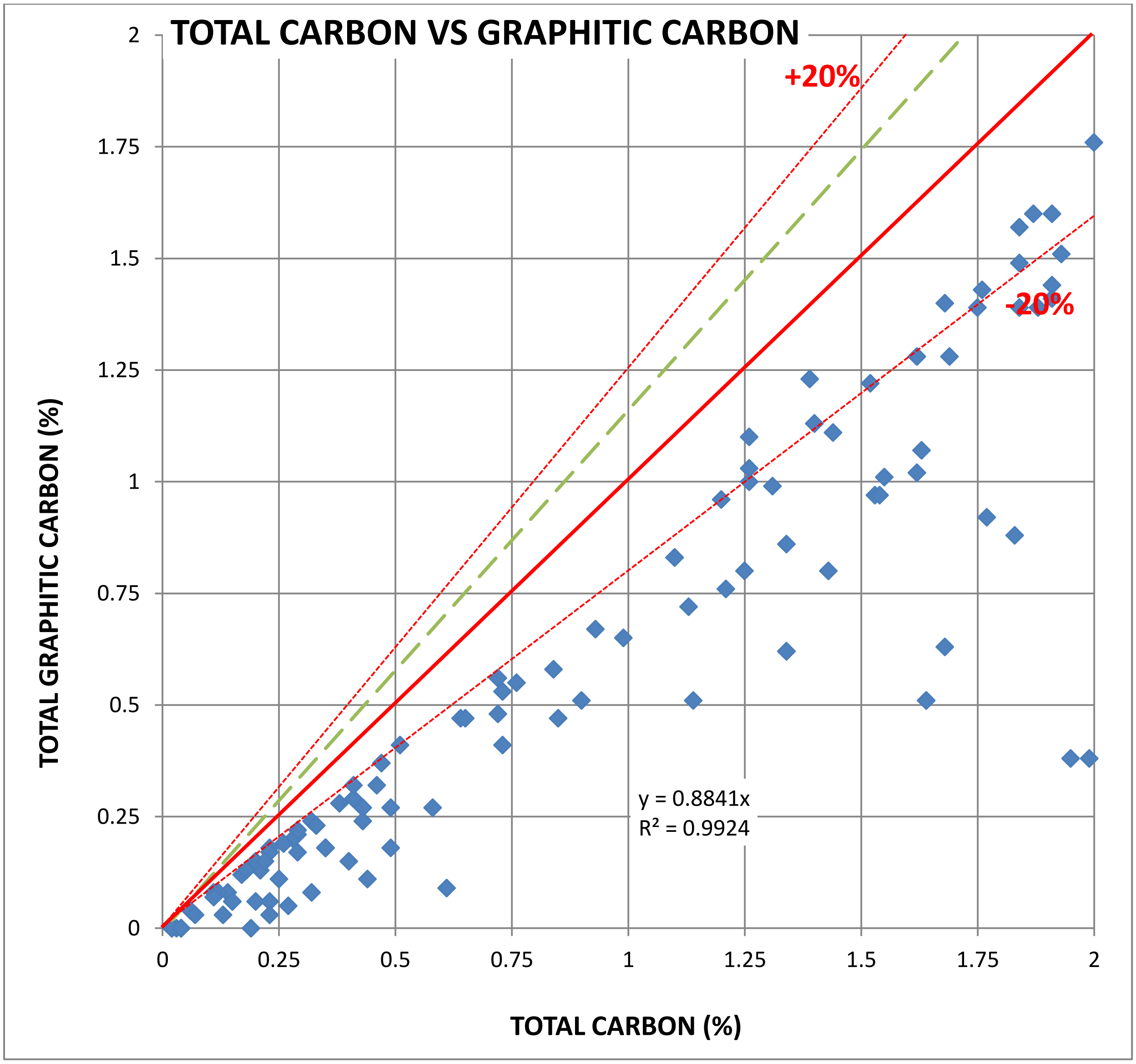


Figure 28: Check samples: % total carbon versus % organic carbon.

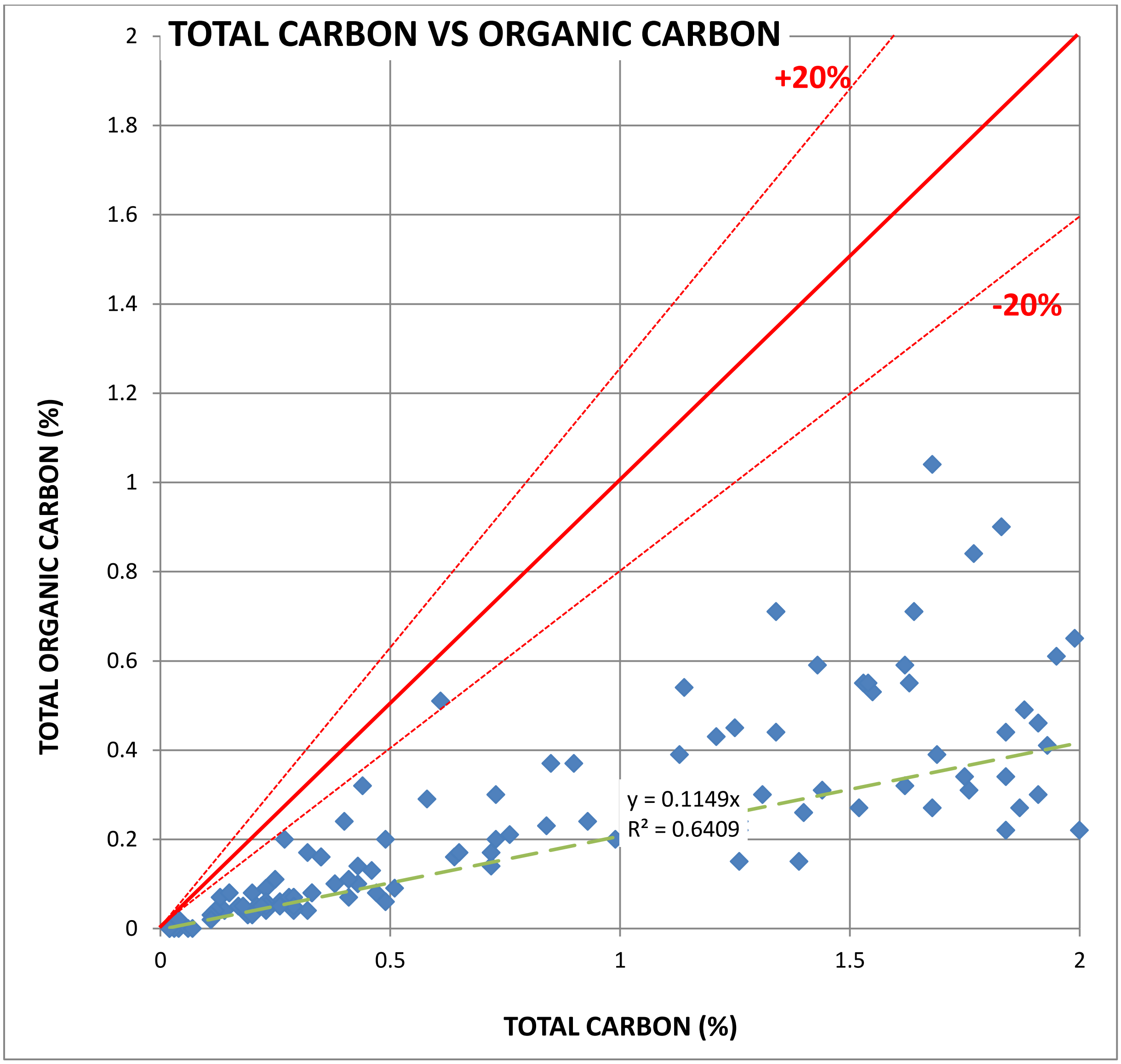
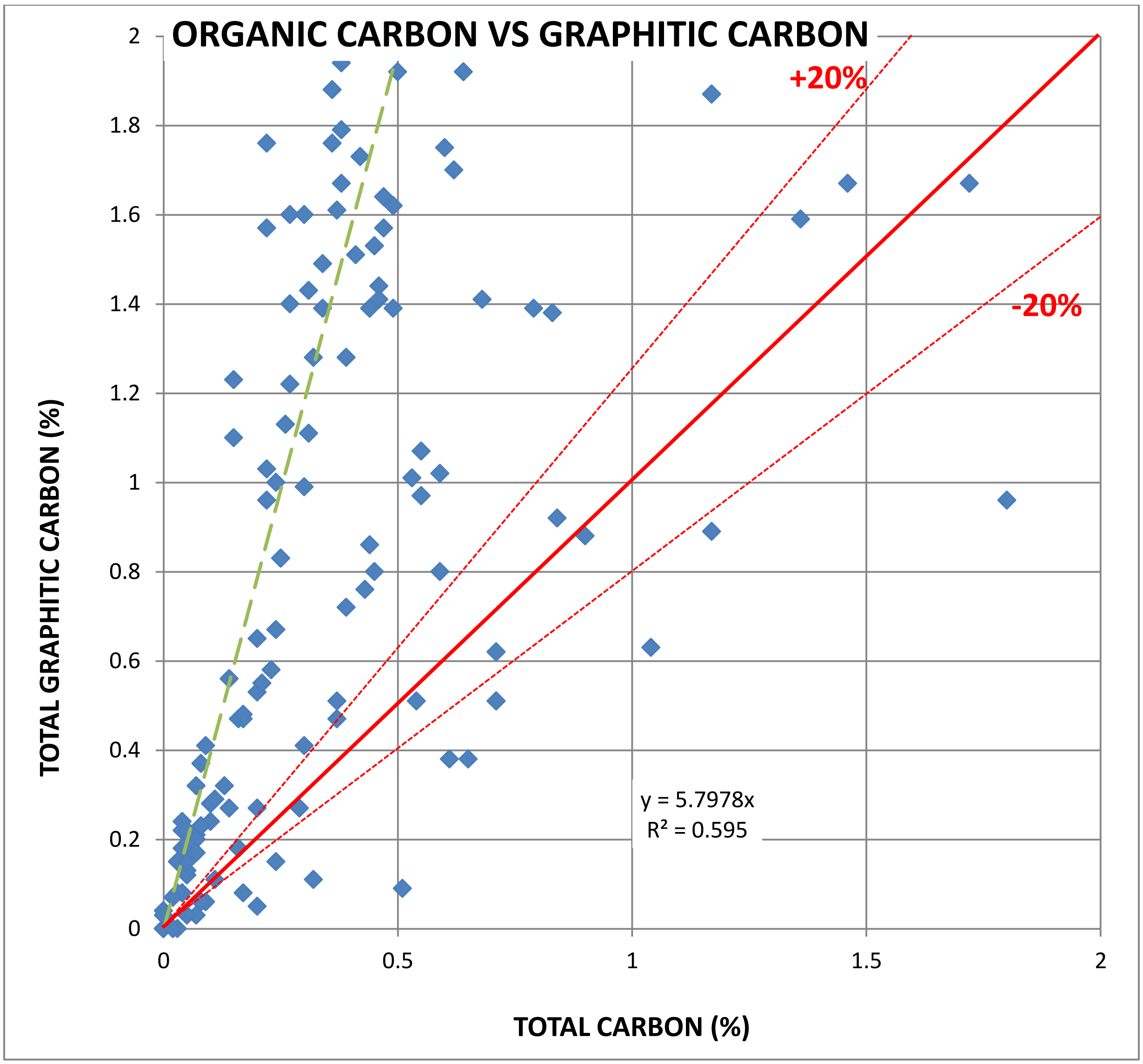


Figure 29: Check samples: % organic carbon versus % graphitic carbon.



14.3.2 Additional In situ sampling

During the site visit, four in situ samples were taken, one in the pseudo adit of Graphite Creek by the co-author Mr. S. Nicholls, two on different outcrops on the eastern flank of Graphite Creek and one from talus by the author Mr. C. Duplessis.

Each sample had two preparations and two pulps prepared. Each pulp was assayed for graphitic carbon two times. This sampling shows consistent high grade results and provides additional confidence in the quality of the resource estimation and additional reasons not to cap the assay results. (Table 16).

Table 16: Additional in situ sample results.

REP No.	CA02986-NOV12	
Customer	SGS Geostat Ltd	
Attention	Claude Duplessis	
Reference		
Project		
ChargeId	OTHER	
Batch	0227-NOV12	
Samples	16	
Chemist	debbie	
Title	Final Report	
Date	16-Nov-12 13:32	
Type	Sample ID	C(g)
		%
SMP	41130 - 41	42.8
SMP	41130 - 41	42.4
SMP	41130 - 41	32.8
SMP	41130 - 41	40.8
SMP	41134 - 41	5.09
SMP	41134 - 41	5.57
SMP	41134 - 41	5.52
SMP	41134 - 41	5.6
SMP	41138 - 41	60.1
SMP	41138 - 41	59.8
SMP	41138 - 41	61.7
SMP	41138 - 41	62.2
SMP	41142 - 41	61.5
SMP	41142 - 41	61.6
SMP	41142 - 41	62.1
SMP	41142 - 41	62

14.4 Mineralized Zones

The geological interpretation of the mineralized zone/solids was prepared by APEX geologists and was based on a combination drillholes displayed on cross sections and surface geological mapping. The agreement between geological interpretation and the mineralized intersections defined from the drillholes was verified (Figures 30 and 31).

Figure 30. Plan view with trace of cross sections and solids (lodes) in GENESIS.

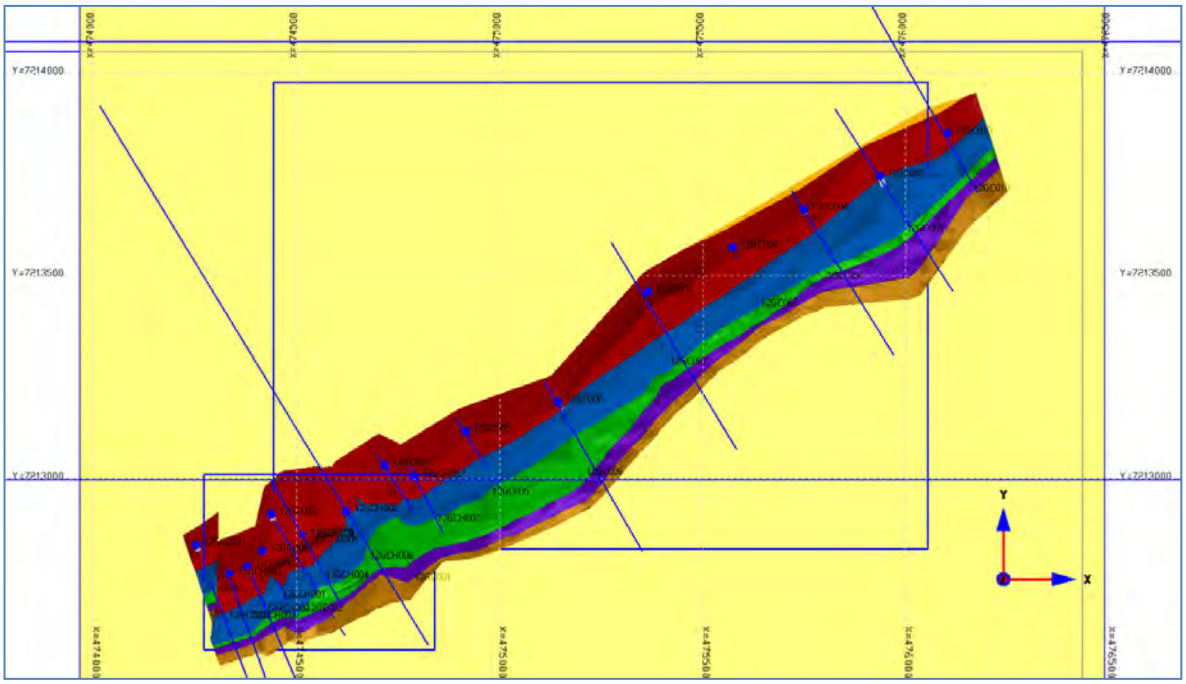


Figure 31: Typical cross sections with % graphitic carbon color coded with zones (lodes).

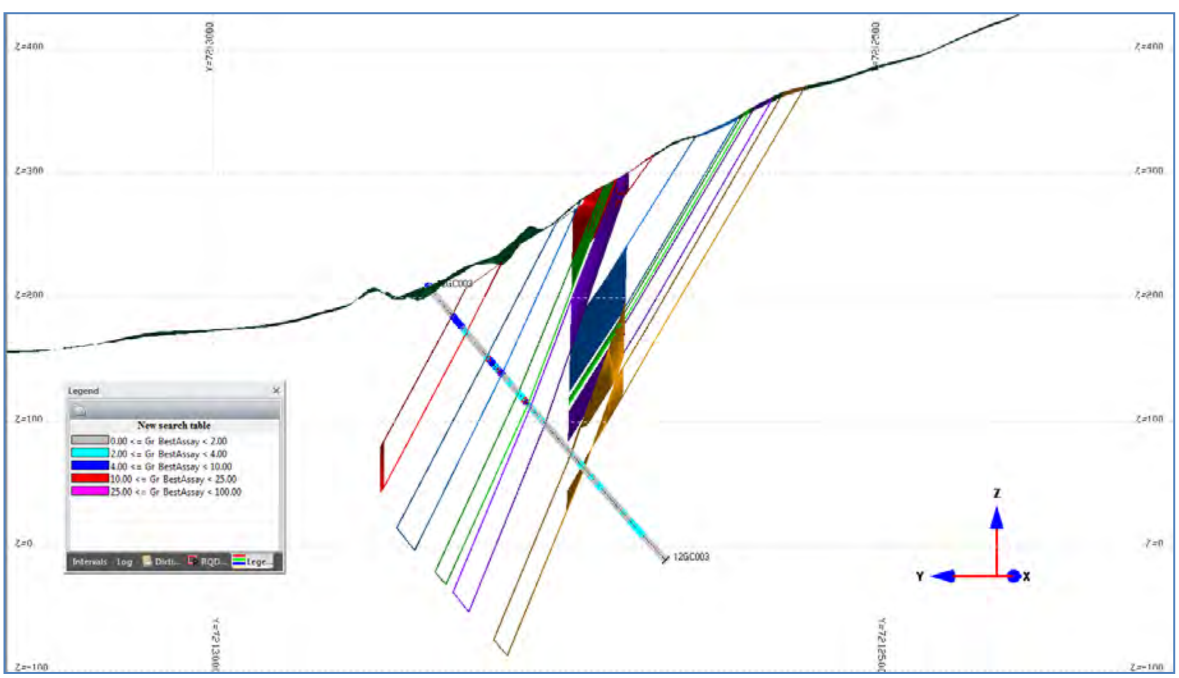
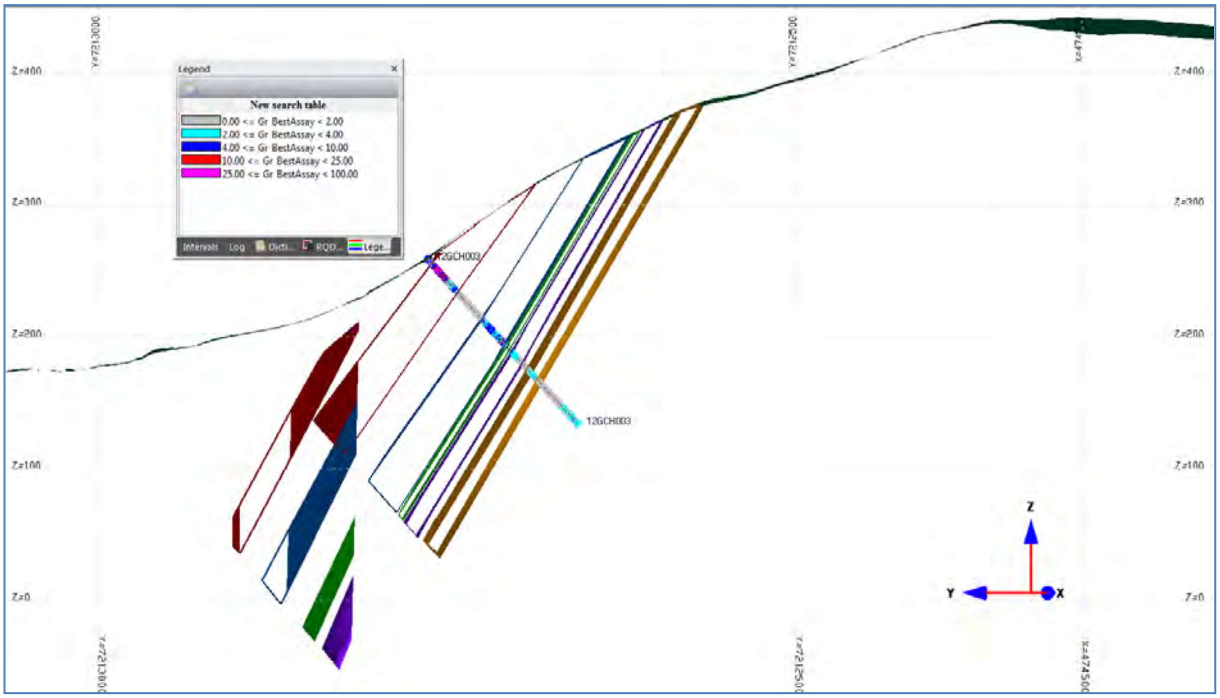


Figure 31, continued.



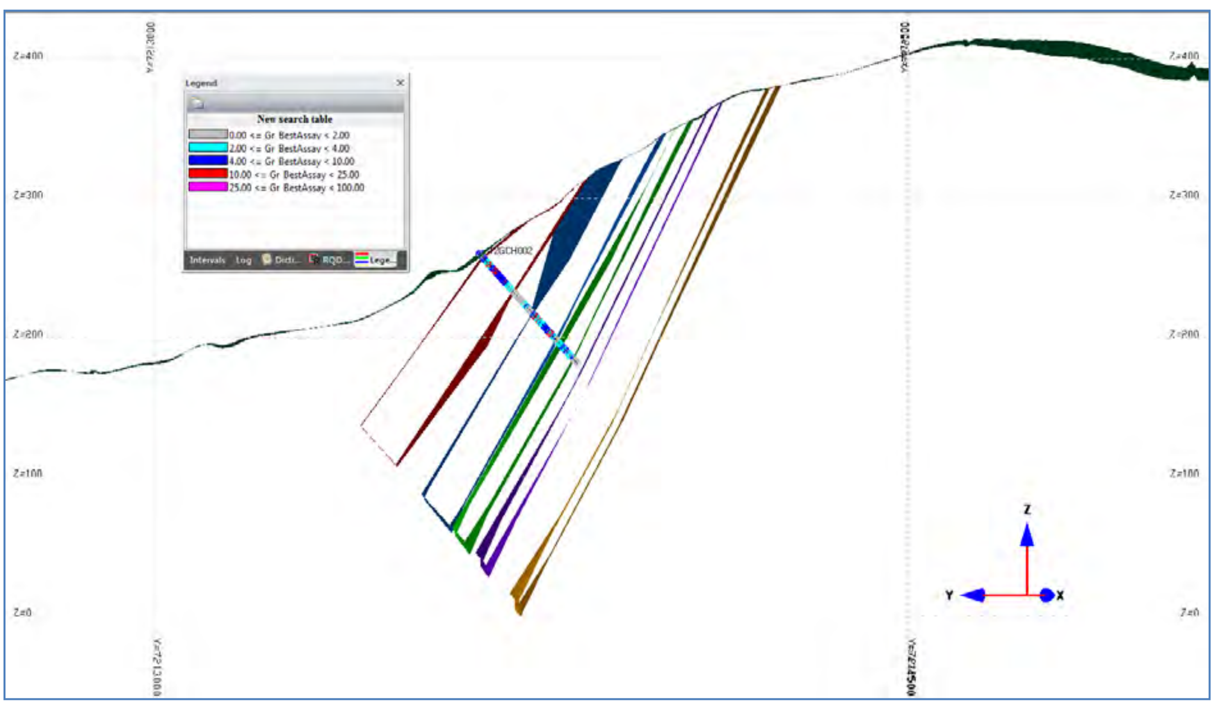


Figure 31, continued.

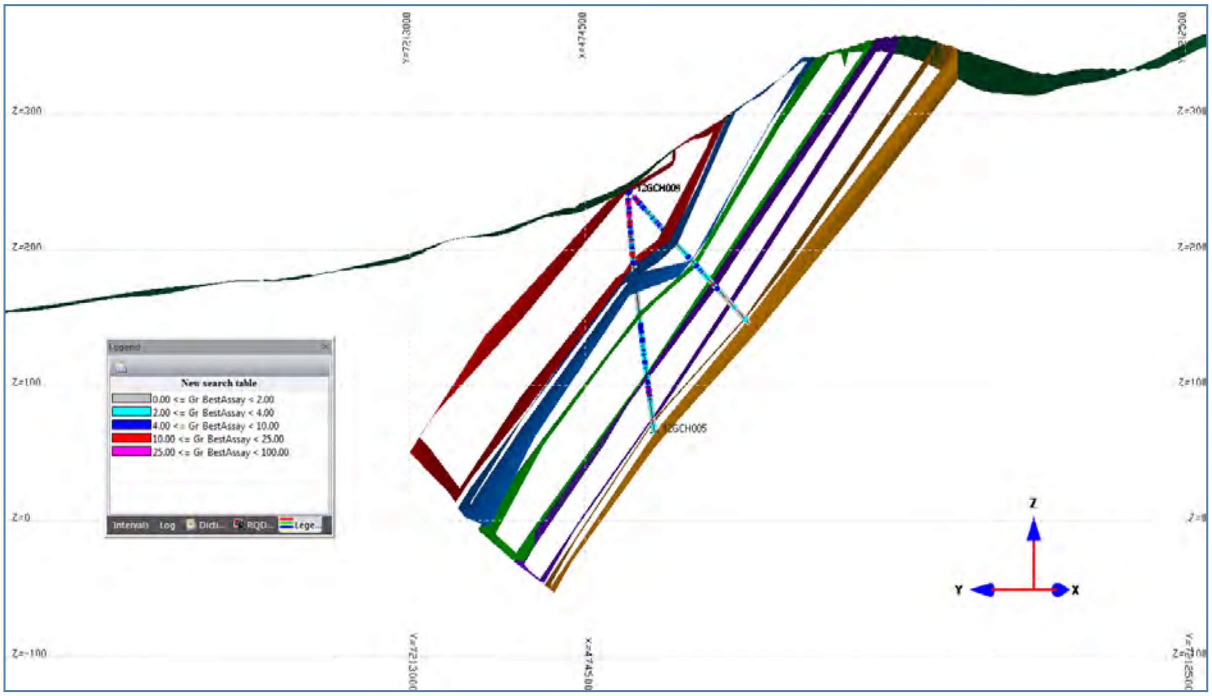


Figure 32: Plan view of mineralized solids (lodes).

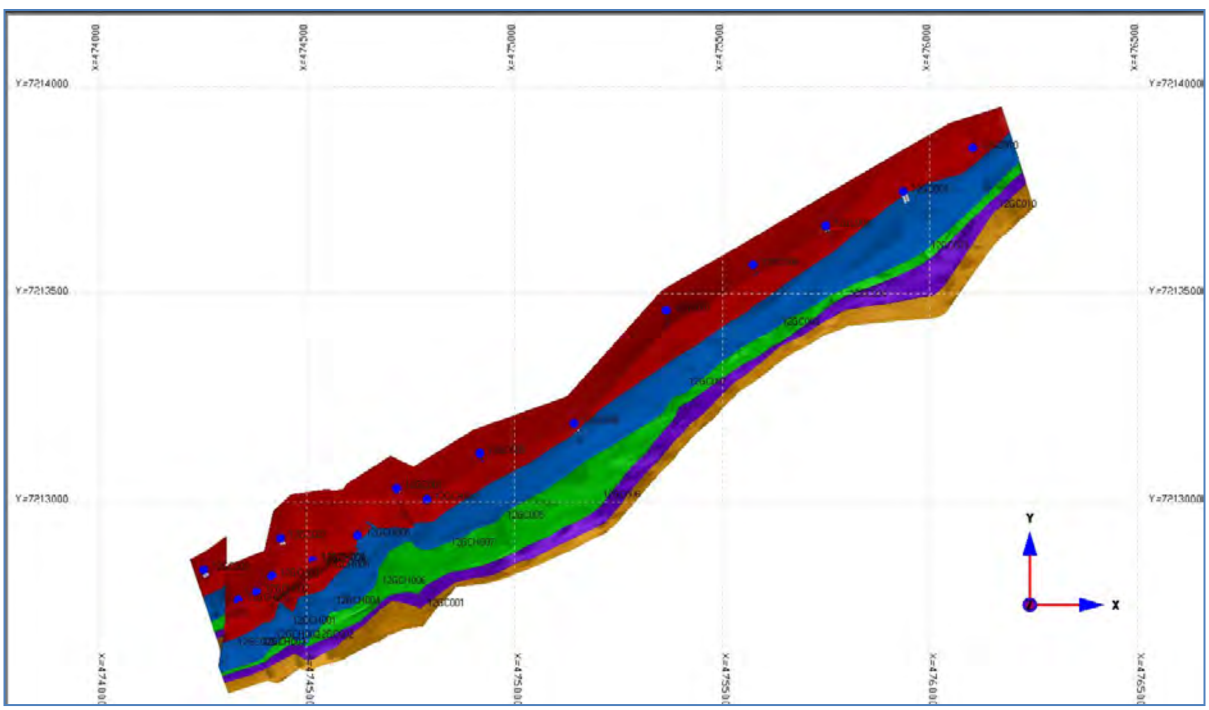
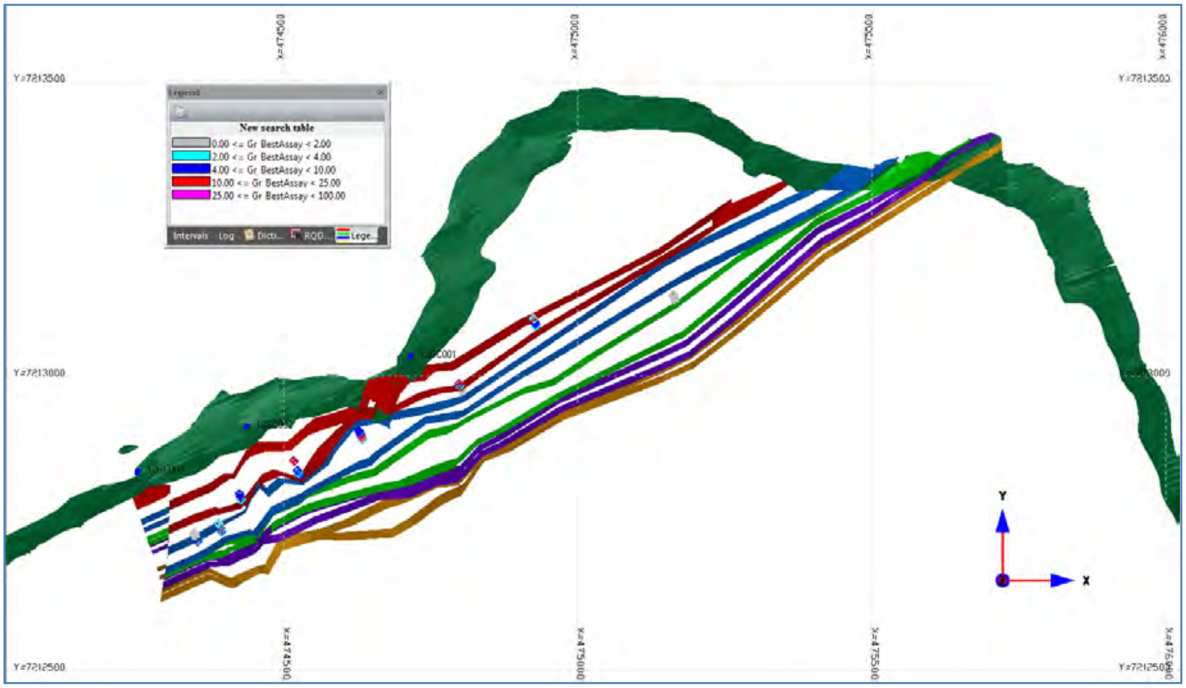
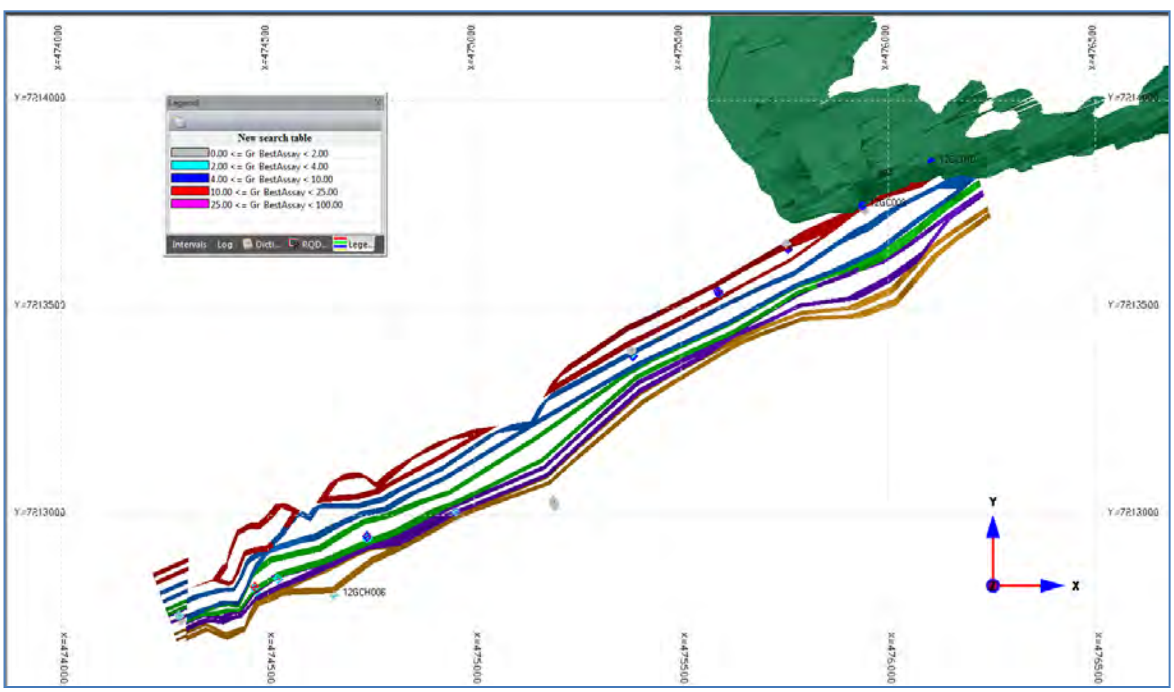


Figure 33: Typical plan view of mineralized solids (lodes) at 200 mZ and 100 mZ elevation.





14.5 Composites

The method used to estimate the resources is to evaluate the grades of regular sized blocks inside the mineralized zone. This method requires the use of samples of regular length. Composites are then created from the original samples. For the transformation of original assay into composites, lengths of 2 m with a minimum length of 1 m were calculated to take into account some dilution. This length is considered suitable compared to the dimension of the selected block size of the model (5 m E by 2 m N by 5 m Z) and to smooth the effect of the high grade samples along with barren material, thus creating a realistic selectable mineralized block.

The regular 2 m composites have been calculated with dilution (inclusion of barren material at 0% graphite) when no assay was available from collar to the end of the hole. The composites situated within the solids were used in the estimation.

14.6 Analysis of the Graphitic Carbon Grades and Distribution

The grade of the 2 m composites used in the calculation show a distribution approaching the log normal law. There is presence of various high grade values of different magnitudes. The following figures, present the normal and lognormal histograms, and cumulative frequency log plots of the 2 m composites in the Graphite Creek five main mineralized domains (lodes; Figures 34 to 48). The statistics of the 2 m composites for each lode follow the figures (Tables 17 to 21).

Figure 34: Histogram of the % graphite for the 2 m composites within the Lode 1 domain.

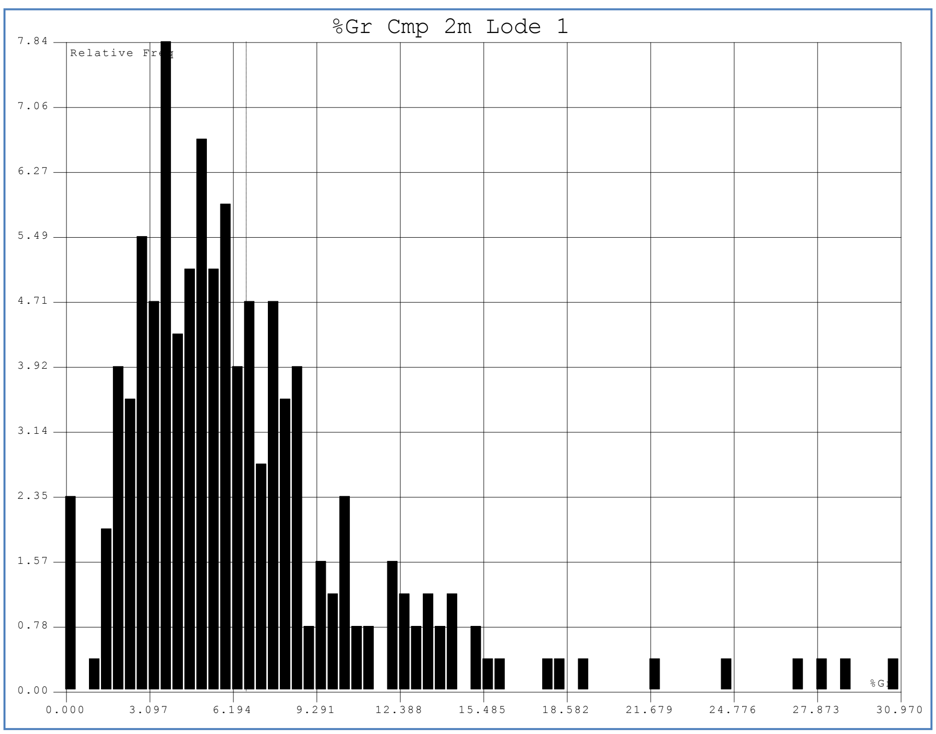


Figure 35: Log Histogram of the % graphite for the 2 m composites within the Lode 1 domain.

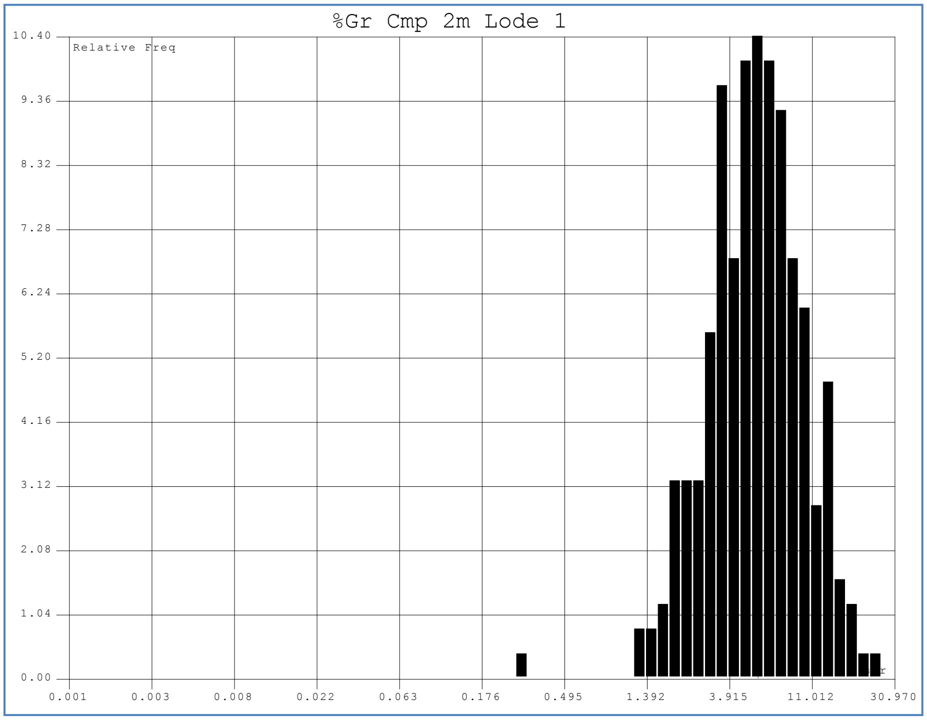


Figure 36: Cumulative frequency diagram of the % graphite for the 2 m composites within the Lode 1 domain.

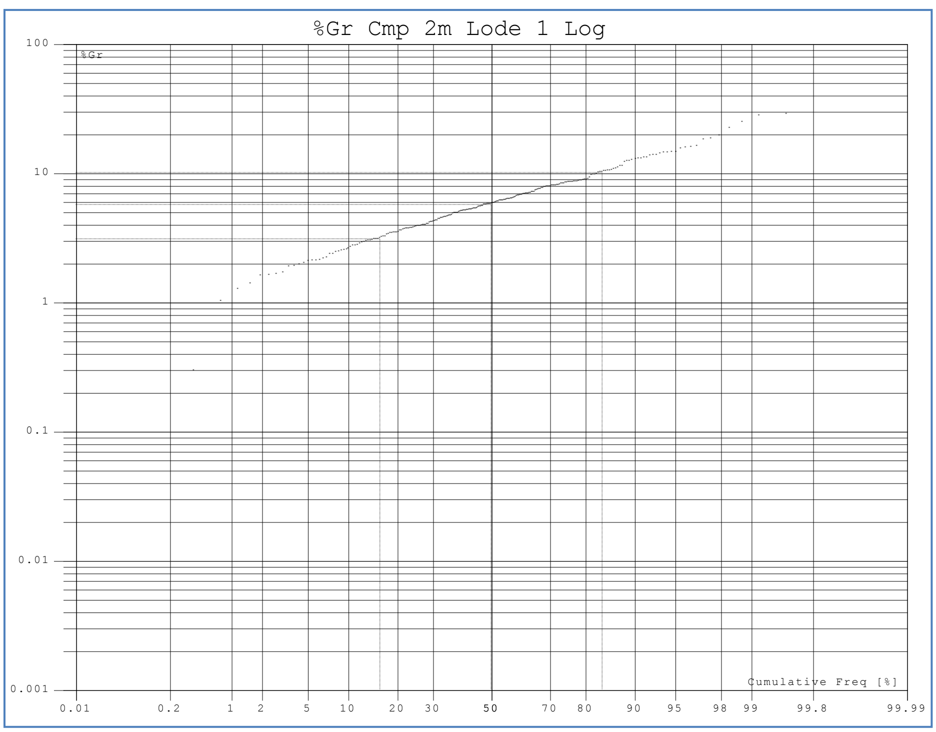


Table 17: Summary statistics of 2 m composites within the LODE 1 domain.

	Lode 1	
	Regular	Log
Minimum Value	0.0000	0.0000
Percentile 5%	1.6700	0.7178
16%	2.6900	1.1249
50%	5.6400	1.7370
84%	10.0300	2.3076
95%	14.3000	2.6603
Maximum Value	30.9700	3.4330

# Samples	255
Average	6.7073
Variance	22.8018
Std. Dev.	4.7751
Coef of Var.	0.7119
Skewness	2.1712
Kurtosis	9.7630

# Log Samples	250
Log Average	1.7312
Log Variance	0.3929
Log Std. Dev.	0.6268
Log Mean	6.8731
Log Skewness	-0.2580
Log Kurtosis	4.5475

Figure 37: Histogram of the % graphite for the 2 m composites within the Lode 2 domain.

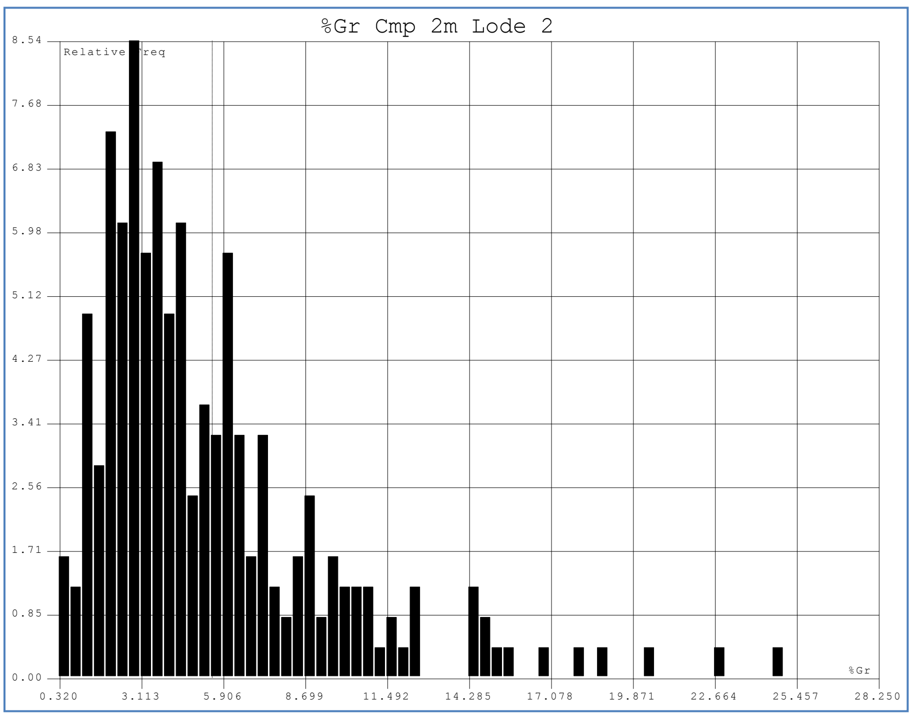


Figure 38: Log histogram of the % graphite for the 2 m composites within the Lode 2 domain.

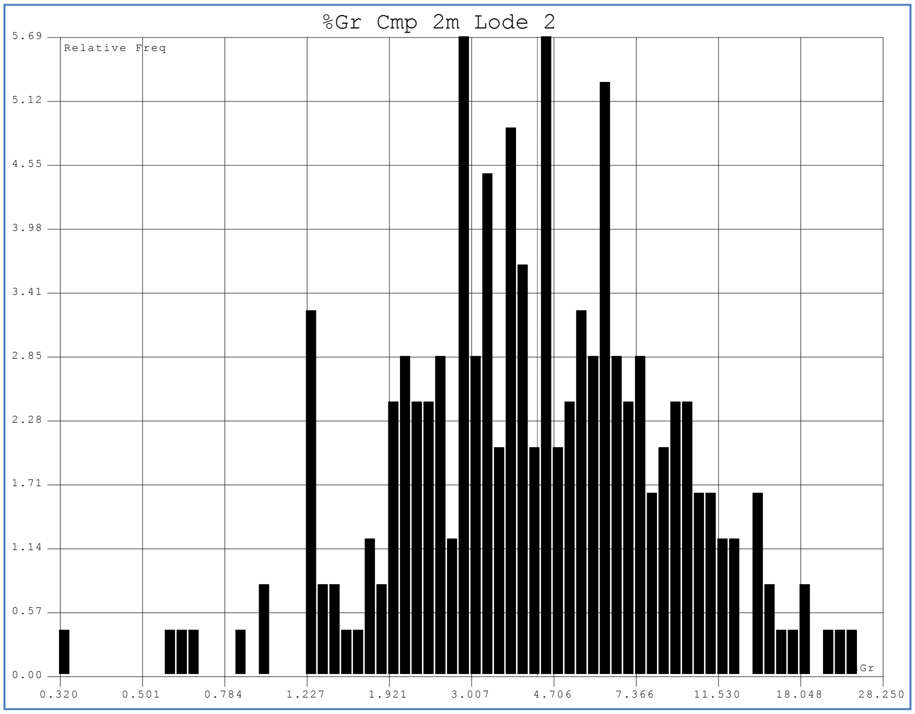


Figure 39: Cumulative frequency diagram of the % graphite for the 2 m composites within the Lode 2 domain.

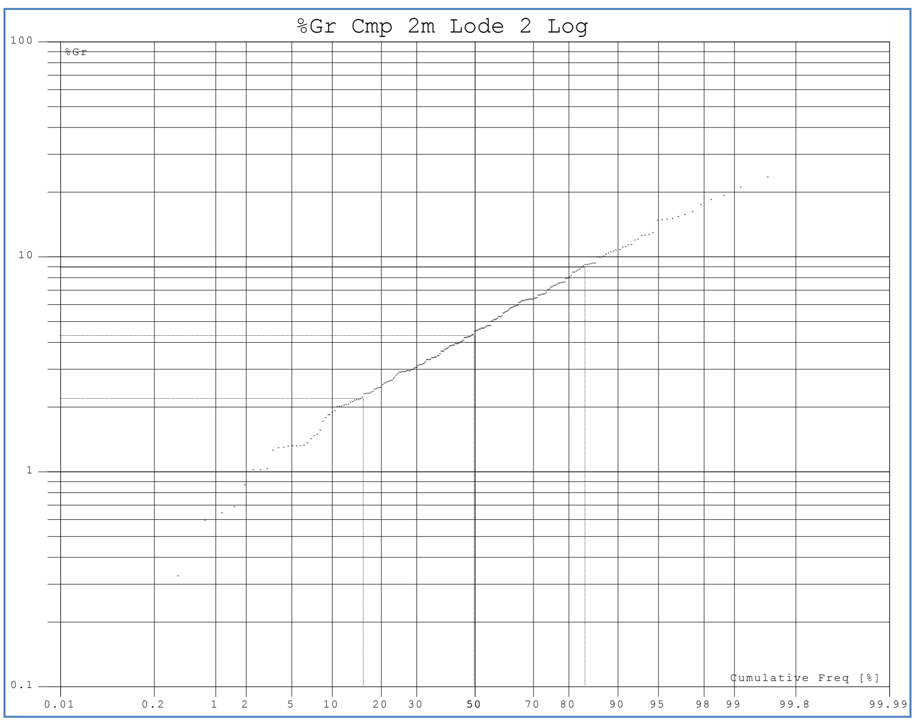


Table 18: Summary statistics of the 2 m composites within the LODE 2 domain.

	Lode 2	
	Regular	Log
Minimum Value	0.3200	-0.5447
Percentile 5%	1.2900	0.2546
16%	2.1700	0.7747
50%	4.2600	1.4493
84%	8.8400	2.1793
95%	14.4900	2.6735
Maximum Value	28.2500	3.3411

# Samples	246
Average	5.5424
Variance	18.1123
Std. Dev.	4.2559
Coef of Var.	0.7679
Skewness	2.0676
Kurtosis	8.8085

# Log Samples	246
Log Average	1.4637
Log Variance	0.5196
Log Std. Dev.	0.7208
Log Mean	5.6040
Log Skewness	-0.2097
Log Kurtosis	3.3851

Figure 40: Histogram of the % graphite for the 2 m composites within the Lode 3 domain.

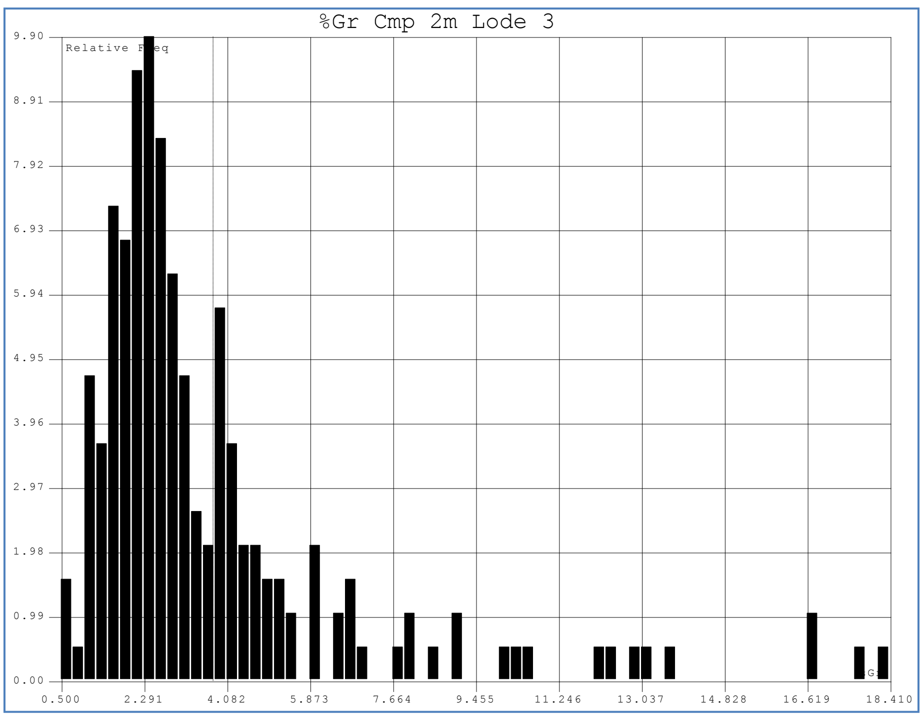


Figure 41: Log histogram of the % graphite for the 2 m composites within the Lode 3 domain.

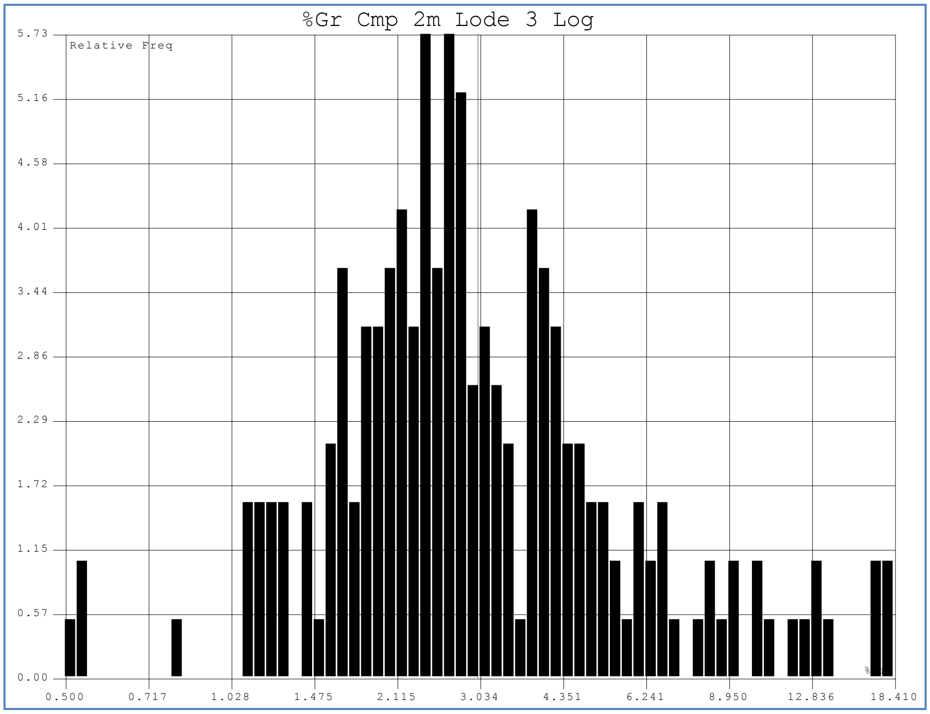


Figure 42: Cumulative frequency diagram of the % graphite for the 2 m composites within the Lode 3 domain.

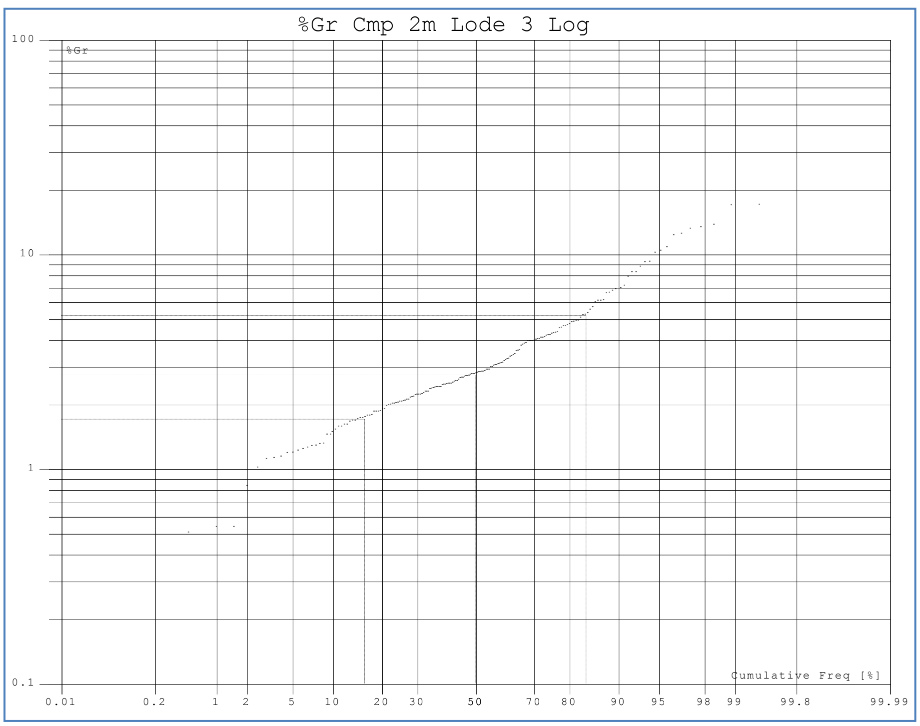


Table 19: Summary Statistics of the 2 m composites within the LODE 3 domain.

	Lode 3							
	Regular	Log						
Minimum Value	0.5000	-0.6349		# Samples	192		# Log Samples	192
Percentile 5%	1.1800	0.1655		Average	3.7844		Log Average	1.1021
16%	1.7000	0.5306		Variance	9.8751		Log Variance	0.4155
50%	2.7300	1.0043		Std. Dev.	3.1425		Log Std. Dev.	0.6446
84%	5.1600	1.6409		Coef of Var.	0.8304		Log Mean	3.7058
95%	10.2700	2.3292		Skewness	2.5222		Log Skewness	0.4249
Maximum Value	18.4100	2.9129		Kurtosis	10.0153		Log Kurtosis	3.7055

Figure 43: Histogram of the % graphite for the 2 m composites within the Lode 4 domain.

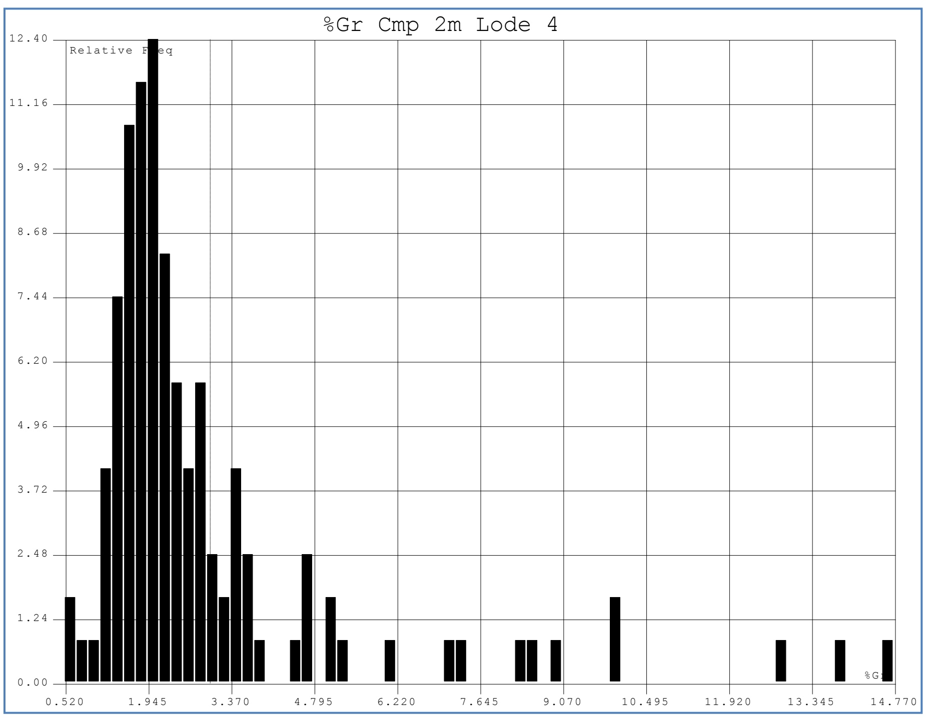


Figure 44: Log Histogram of the % graphite for the 2 m composites within the Lode 4 domain.

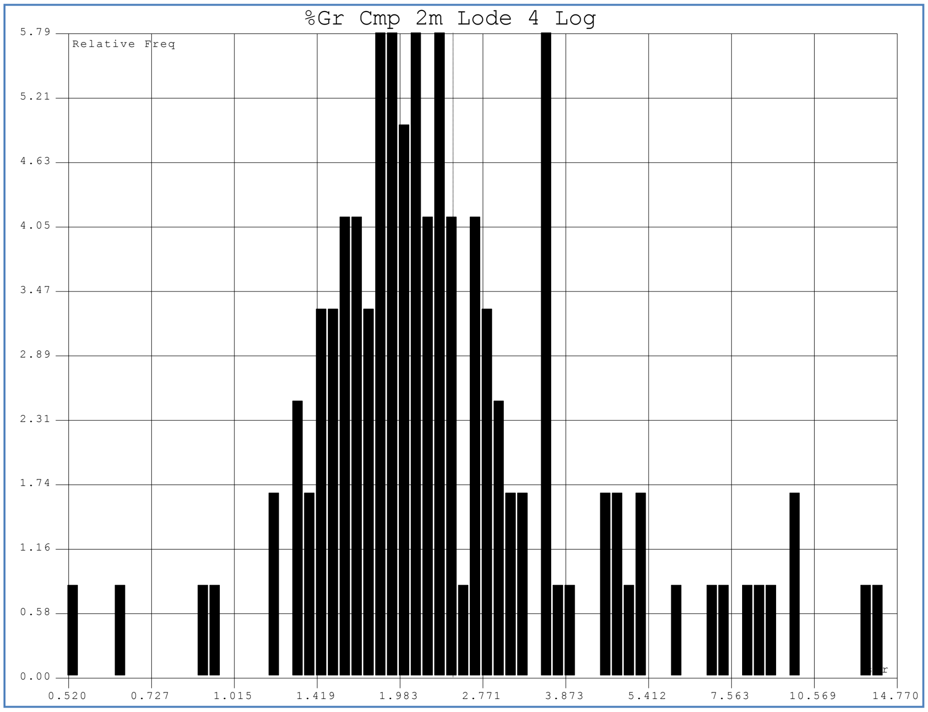


Figure 45: Cumulative frequency diagram of the % Graphite for the 2 m composites within the Lode 4 domain.

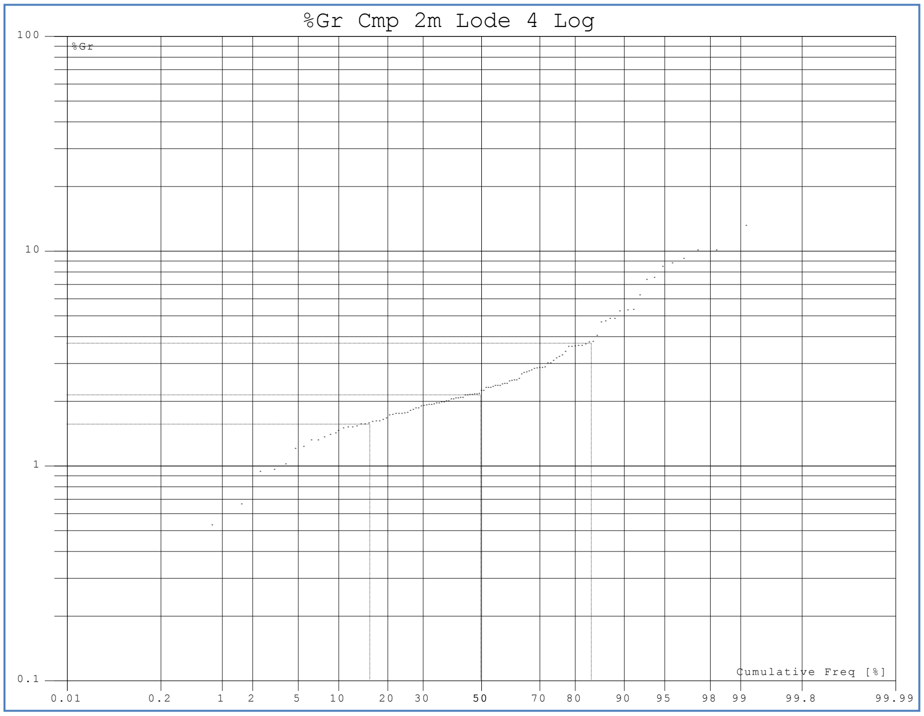


Table 20: Summary Statistics of the 2 m composites within the LODE 4 domain.

	Lode 4							
	Regular	Log						
Minimum Value	0.5200	-0.4308		# Samples	121		# Log Samples	121
Percentile 5%	1.2000	0.1823		Average	3.0138		Log Average	0.9028
16%	1.5500	0.4383		Variance	6.1794		Log Variance	0.3371
50%	2.1200	0.7514		Std. Dev.	2.4858		Log Std. Dev.	0.5806
84%	3.6900	1.3056		Coef of Var.	0.8248		Log Mean	2.9191
95%	8.3000	2.1163		Skewness	2.7537		Log Skewness	0.8773
Maximum Value	14.7700	2.6926		Kurtosis	11.0919		Log Kurtosis	4.3536

Figure 46: Histogram of the % graphite for the 2 m composites within the Lode 5 domain.

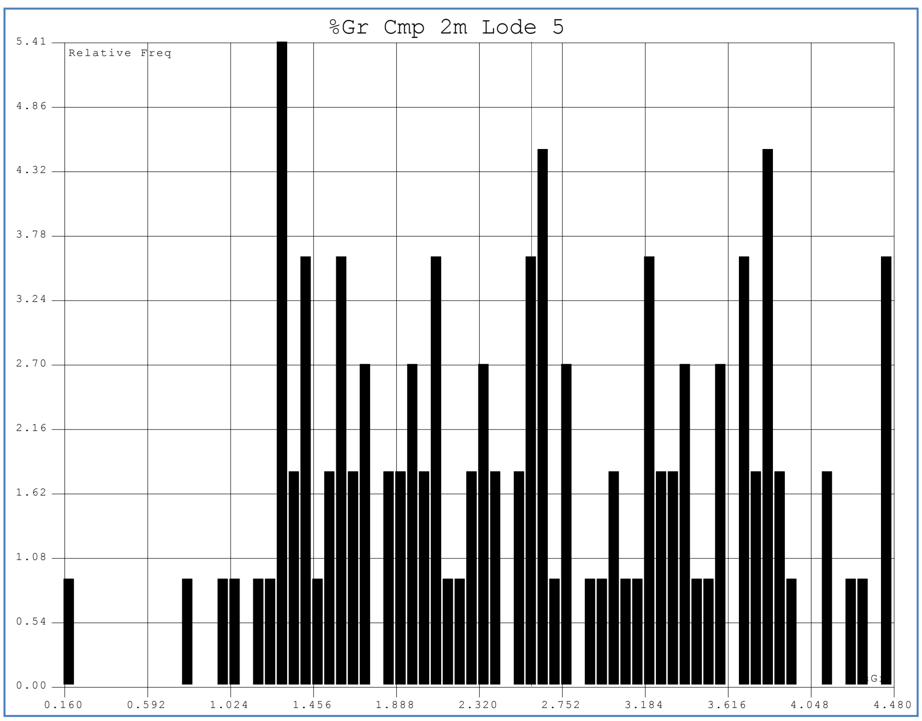


Figure 47: Log histogram of % graphite for the 2 m composites within the Lode 5 domain.

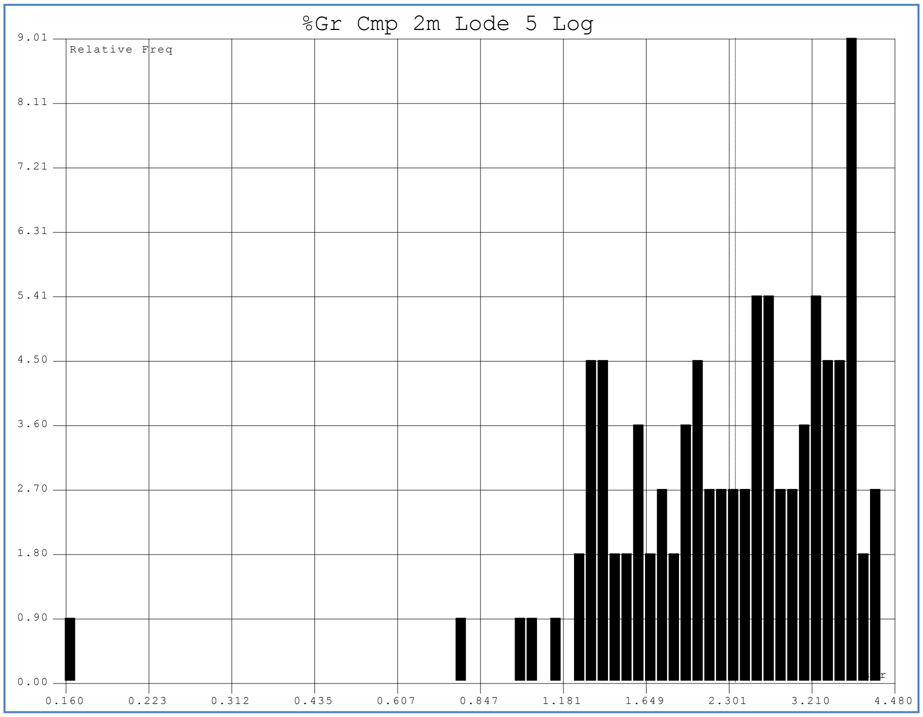


Figure 48: Cumulative frequency diagram of the % graphite for the 2 m composites within the Lode 5 domain.

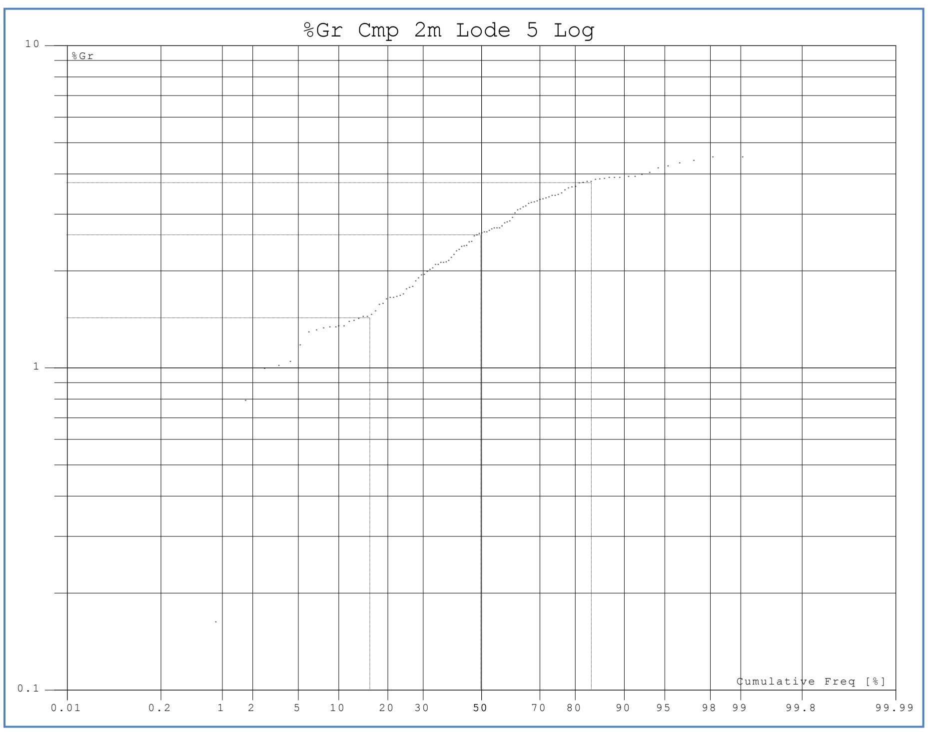


Table 21: Summary Statistics of the 2 m composites within the LODE 5 domain.

	Lode 5							
	Regular	Log						
Minimum Value	0.1600	-0.2485		# Samples	111		# Log Samples	111
Percentile 5%	1.1600	0.1484		Average	2.5966		Log Average	0.8617
16%	1.4200	0.3507		Variance	0.9949		Log Variance	0.2305
50%	2.5700	0.9439		Std. Dev.	0.9975		Log Std. Dev.	0.4801
84%	3.7300	1.3164		Coef of Var.	0.3841		Log Mean	2.6564
95%	4.1600	1.4255		Skewness	0.0590		Log Skewness	-1.7438
Maximum Value	4.4800	1.4996		Kurtosis	2.0161		Log Kurtosis	10.0456

As the histogram of the previous figures show, most of the % graphite values are within a tight Log normal distribution. This suggests the domains could probably be refined into additional discrete zones. Based on the data available at the time of this resource it is deemed suitable for use in its present form.

In Mr. C. Duplessis's opinion, there is no reason to cap the high grade assays observed in the histograms as they are not deemed to be a part of the nugget effect. High grade zones exist at the Graphite Creek Property, and have been verified by sampling during the independent field visit. Thus it is deemed that no capping should be applied to the composites.

The spatial continuity of the % graphite content was reviewed with preliminary geostatistical analysis. The calculated variograms were not obvious, suggesting a minimum 100 m distance of influence of the samples for estimation to a maximum of 150 m in log, however an indicator variogram using 5% present range of 200 m. Geostatistical estimation was not used, the variogram analysis did not reflect continuous graphite mineralization observed in the field.

The continuity of grade is good in almost all directions within the graphitic schist lodes. It has been determined that a drilling pattern of 50 m x 50 m should prove sufficient to upgrade the resource classification to measured, which has been based on the data available at the time of the resource estimation in this Technical Report.

14.7 Resource Estimation

The classification of Mineral Resources and Mineral Reserves used in this report relies with the definitions provided in National Instrument 43-101, which came into effect on February 1, 2001, and has since been revised in 2011. SGS Canada Inc. further confirms that it has followed the guidelines adopted by the Council of the Canadian Institute of Mining, Metallurgy and Petroleum.

The mineral resources at the Graphite Creek Property are classified as an inferred resource. An 'Inferred Mineral Resource' is that part of a Mineral Resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drillholes.

The resource has been estimated within the three dimensional solids that were created from cross sectional lode interpretation. The upper contact has been cut by either the overburden or topography surface. Grade was estimated into a regularised block model consisting a parent block size of 2 m N by 5 m E by 5 m Z (Table 23). No sub blocking was used. A fixed specific gravity of 2.7 t/m^3 is used, which was based on the 4,104 density measurements collected on the diamond drill core using the air/water displacement method. Inverse Distance squared estimation technique was chosen for the grade estimation. The inferred resources are contained within a drilled extent of approximately 2.1 km along strike to the northeast, 230 m cross strike to the southeast and 320 m below surface.

The first (2012) NI 43-101 compliant resources statement is summarized in Table 22. The maiden inferred resource estimate of the Graphite Creek Property uses a cut-off grade of 3.0% Cg and includes 107.2 million tonnes of mineralized graphite schist at a graphite grade of 5.78% Cg. Based on this tonnage and grade, the in situ graphite is 6.2 million tonnes. Tonnage, grade and in situ tonnages are also provided using cut-off values of 2.0%, 5.0%, 7.0% and 10.0% Cg (Table 22).

Table 22: Graphite Creek Maiden Inferred Resource estimate reported at cut-offs of 2.0%, 3.0%, 5.0%, 7.0% and 10.0% graphitic carbon. The recommended inferred resource is at a cut-off of 3.0 graphitic carbon.

Cut-off grade (% Cg [1]) by LECO	Tonnage (million)	Graphite % (Cg) by LECO	In situ graphite (metric tonnes [3])
2.0	164.5	4.61	7,583,450
3.0 [2]	**107.2**	**5.78**	**6,196,160**
5.0	54.98	7.66	4,211,468
7.0	25.44	9.69	2,465,136
10.0	7.8	13.49	1,052,220

[1] Cg - graphitic carbon

[2] This inferred resource recommends using a 3.0% Cg cut-off

[3] metric tonne = 1,000 kg (2,204.6 lbs)

Note 1: The resource estimate does not include the graphite schist that was intersected in drillhole 12GCH0008, which is located 2.2 km southwest of the Graphite Creek Maiden Inferred Resource area.

For the interpolation of grades into the blocks, the estimation was completed in three passes. The first pass comprised a search ellipsoid radius of 200 m oriented at 60° to the North as the primary axis, 125 m radius oriented at 300º North dipping at 58° for the secondary axis, and finally a 15 m radius oriented at 150º North dipping at 42° was used for the third axis (Figure 49). An estimation criterion of a maximum of 6 composites and a minimum of 2 composites was used to estimate the grade. The second pass of estimation utilised search ranges of 450 m, 250 m, 25 m in the same orientation as pass one. The third pass comprised search ellipsoid ranges of 500 m, 500 m, 50 m also within the same search orientation. The maximum and minimum number of composites required for pass two and three were the same as pass one. Plan views of the block model are shown in Figures 50 to 52.

Table 23: Block model origin and extent in meters.

Data Properties

Database Status | Data Contraints | Default Transformation | Default Blocks Grid

Blocks Grid Origin	
Origin X	474 000
Origin Y	7 212 500
Origin Z	500
Blocks Size	
Size in X	5
Size in Y	2
Size in Z	-5
Blocks Discretization	
Discretization in X	1
Discretization in Y	1
Discretization in Z	1
Blocks Grid Index	
Start iX	1
Start iY	1
Start iZ	1
End iX	461
End iY	751
End iZ	141
Blocks Grid Coordinate	
Start X	474 000
Start Y	7 212 500
Start Z	500
End X	476 300
End Y	7 214 000
End Z	-200

Figure 49: Search Ellipsoids used in the resource estimation.

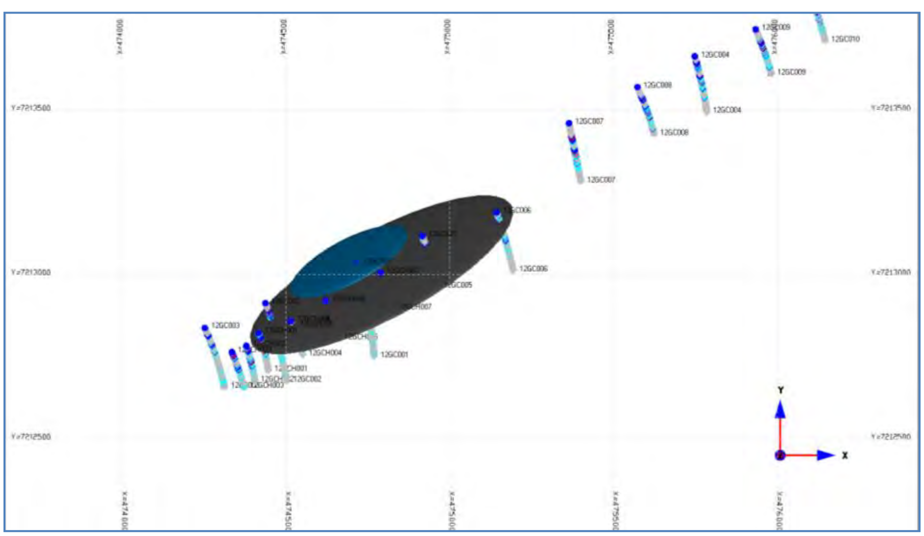


Figure 50: Plan view of the block model at 200 & 250 mZ close-up.

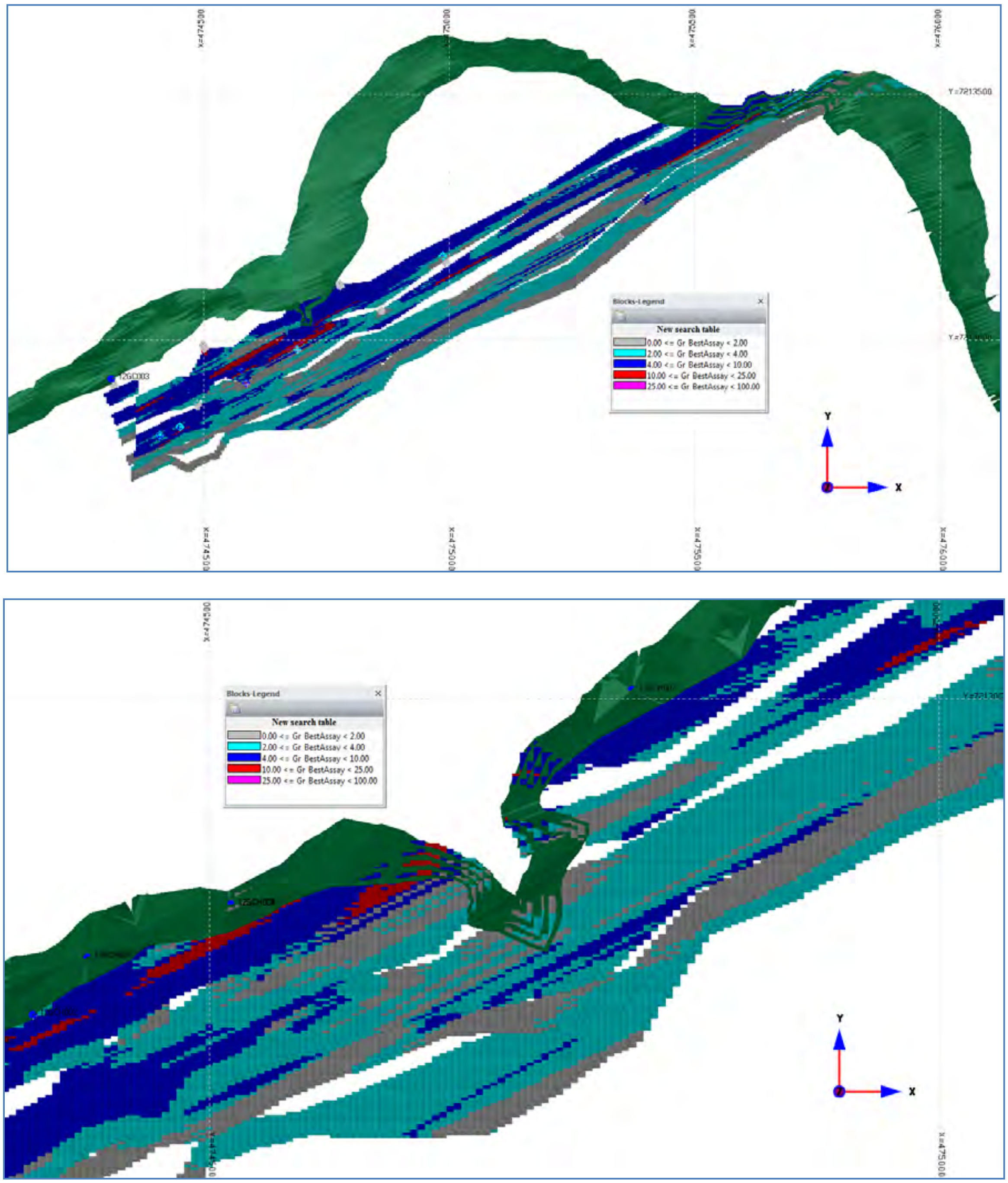


Figure 51: Typical cross section of the block model looking West at 474335N.

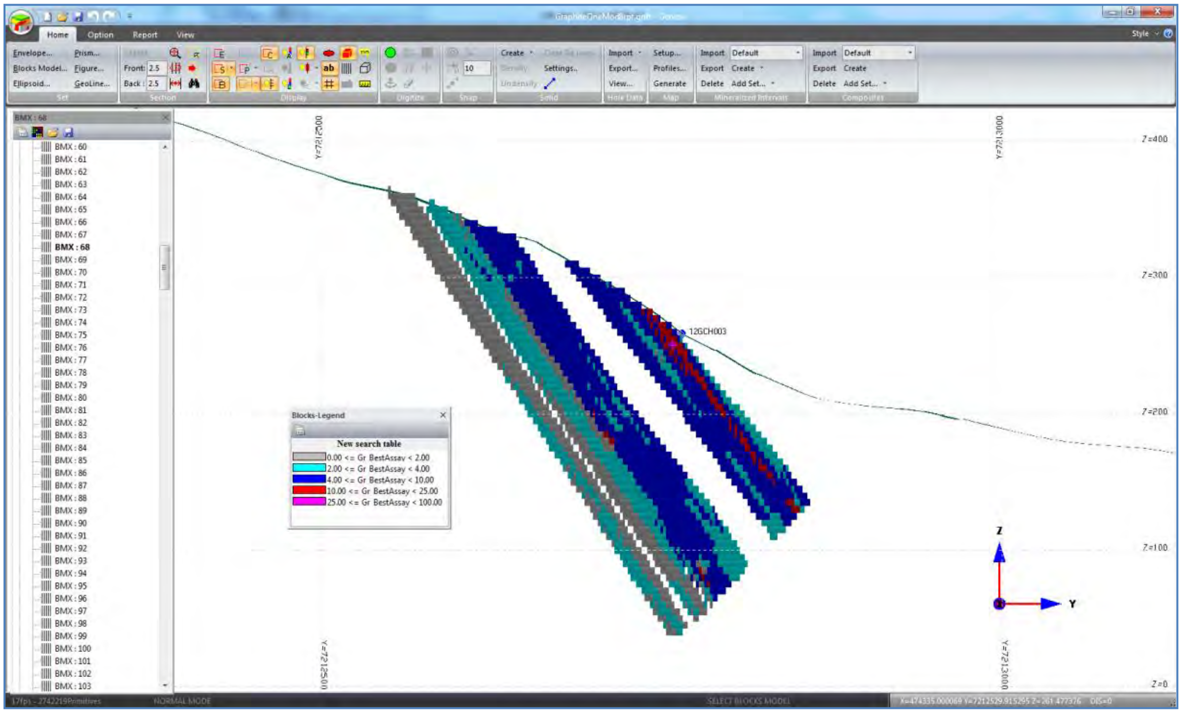
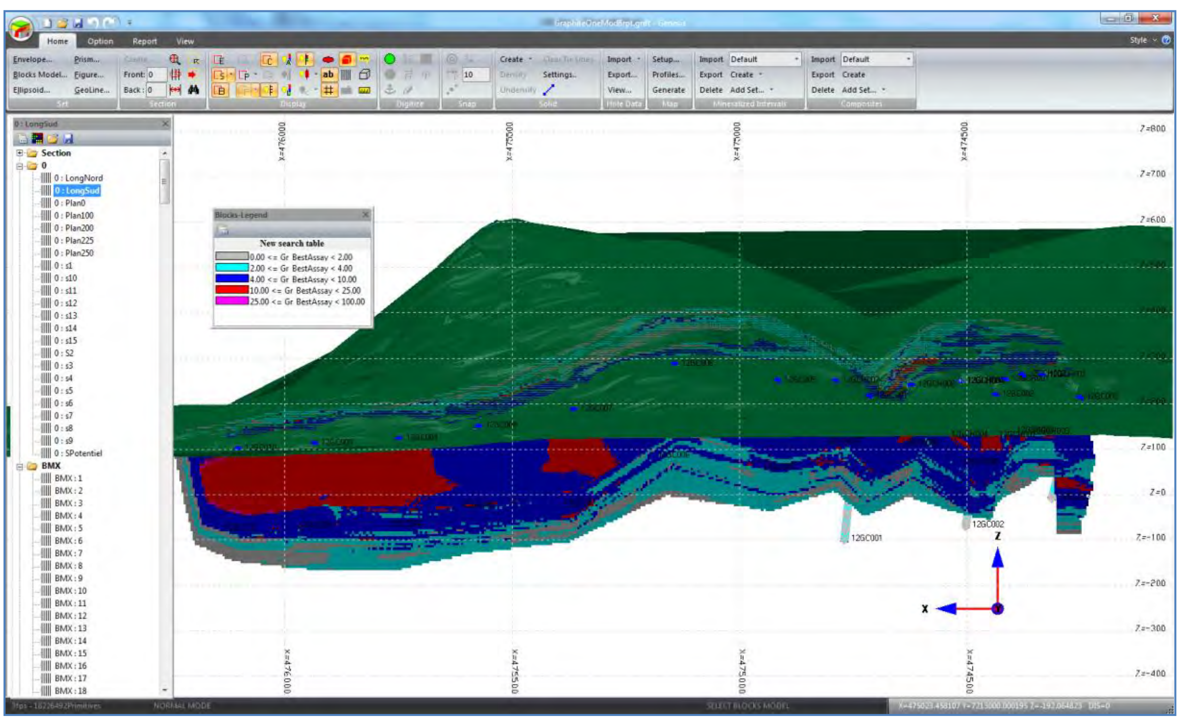


Figure 52: Long section of the block model looking south.



The base case cut-off grade of 3% Cg is based on a conservative approach of 80% recovery for a 95% Graphite concentrate with average selling price of $1200/tonne. Economic criteria for selection of the 3.0% block cut off for the resource block model uses a 3 year trailing average price from the industrial minerals website (www.indmin.com). The assumption is the distribution of final product of 1/3 low value (800$/tonne), 1/3 medium value (1,200$/tonne) and 1/3 high value (1,600$/tonne). A mining cost of 5$/tonne plus a processing cost of 18$/tonne, plus 5$/tonne for G&A, plus 2$/tonne environmental, totals 30$/tonne. This reflects a 3% cut-off grade based on 1,200$/tonne selling price (all expressed in USD$). As the graphitic mineralization is outcropping on the hill side, a very low waste to ore ratio is envisaged for an open cut mining operation. Based on the above cut-offs and graphite mining and processing costs, the author, Mr. C. Duplessis feels it is justifiable to use a reporting cut-off value of 3.0% Cg in this Technical report.

15 Adjacent Properties

Figure 3 shows the current mineral claims in the Graphite One Property area. The nearest claims are some 20 km or greater to the east-southeast. These distantly adjacent claims are focused on commodities other than graphite and it is evident from Figure 3 that the Graphite One Property is the only graphite specific exploration Property in the immediate area.

16 Other Relevant Data and Information

16.1 Potential for a Southwestern Extension of Graphite Mineralization at the Graphite Creek Property

The potential for additional mineralization to the southwest of the Maiden Inferred Graphite Creek Resource estimate is based on:

- the results of a single 'step-out' drillhole, 12GCH008, which was drilled about 2.2 km southwest of the Maiden Inferred Graphite Creek Resource estimate. Drill core from 12GCH008 contained 6.02% Cg over 52 m and 7.07% Cg over 31 m (Graphite One Resources Inc., 2012);
- historical hand cobble mining in the southwestern part of the Property, where for example, approximately 130 tons (132.1 tonnes) of hand-sorted high-grade material was reportedly shipped from Christophosen Creek in 1916 (Mertie, 1918);
- positive results from 2012 bedrock sampling, which yielded rock grab samples in the southwestern extension area of 53.2% Cg (sample 12ADP227) and 56.8% Cg (sample 12KPP057; Figure 13); and,
- a probable association between the aforementioned southwestern drillhole, bedrock and historical mineralization and an anomalously high electromagnetic conductor that is known to identify high-grade graphite mineralization both at the Maiden Inferred Graphite Creek resource area and at step-out drillhole 12GCH008.

Consequently, there is evidence that the graphite mineralization extends to include a southwesterly extension of the current Maiden Inferred Graphite Creek resource estimate area, particularly because the airborne geophysics and surface mapping and sampling has shown continuity of the mineralized rocks on surface, at depth and along strike.

In a preliminary fashion, therefore, the approximate tonnage and grade of a potential resource extension can be determined by taking the results from drillhole 12GCH008 (52 m of 6.02% Cg) plus or minus 30 per cent grade, and considering the strike extent from the existing inferred resource. Table 24 shows that estimated tonnages and grades of 235-492 million tonnes at 4.2-7.9% Cg, respectively. The potential in situ graphite of 9.9-38.9 million tonnes might be present if the Maiden Inferred Graphite Creek Resource estimate is extrapolated to the southwest.

Table 24. Potential in situ graphite of the Graphite Creek Property based on a southwestern extension of the Maiden Inferred Graphite Creek Resource estimate.

Tonnage (million)	Graphite % (Cg) by LECO	In situ graphite (metric tonnes)
235 to 492	4.2 to 7.9	9,870,000 to 38,868,000

Note 1: The potential quantity and grade presented in this table is conceptual in nature. There has been insufficient exploration to define an inferred mineral resource and it is uncertain if further exploration will result in the target being delineated as a mineral resource.

16.2 Traditional uses for Graphite

Graphite has properties of both metals and non-metals, which makes it suitable for many industrial applications. The metallic properties include electrical and thermal conductivity. The non-metallic properties include high-thermal resistance, inertness, and lubricity. The combination of conductivity and high-thermal stability allows graphite to be used in many applications, such as batteries, fuel cells, and refractories. Graphite's lubricity and thermal conductivity make it an excellent material for high-temperature applications because it provides effective lubrication at a friction interface while furnishing a thermally conductive matrix to remove heat from the same interface. Electrical conductivity and lubricity allow its use as the primary material in the manufacture of brushes for electric motors. A graphite brush effectively transfers electric current to a rotating armature while the natural lubricity of the brush minimizes frictional wear. Today's advanced technology products, such as friction materials and battery and fuel cells, require high-purity graphite.

Traditional demand for graphite is largely tied to the steel industry where it is used as a liner for ladles and crucibles, as a component in bricks that line furnaces ("refractories"), and as an agent to increase the carbon content of steel. It is used in brake linings, gaskets and clutch materials in the automotive industry. Graphite also has a wide variety of uses in batteries, lubricants, fire retardants, and reinforcements in plastics. Industrial demand for graphite has been growing at about 5% per year for most of this decade due to the ongoing industrialization on China, India and other emerging economies.

16.3 Demand for Graphite in Battery Production

A recent and significant surge for the graphite industry is the incremental demand created by a number of green initiatives including lithium ion (Li ion) batteries, fuel cells, solar energy, semi- conductors, and nuclear energy. Many of these applications have the potential to consume more graphite than all current uses combined. Graphite is in a much stronger position than lithium carbonate as it is the anode material of choice for most battery designs. The anode requires a porous carbon material and graphite is the optimum suitor. There is over 10 kg of graphite in the average hybrid electric vehicle and more than 70 kg in the electric vehicle. Only flake graphite (and synthetic) can be upgraded to 99.9% purity can be used to make “spherical” or “potato” shaped graphite used in Li ion batteries. Large-flake graphite has the greatest electrical conductivity, and is therefore the best for making batteries. In addition, flake graphite is more desirable because it is ~$3000/tonne, whereas synthetic graphite can range from $10,000-$20,000/tonne (Energizer Resources Website).

Primary battery products such as zinc-carbon and alkaline (manganese dioxide) batteries, as well as secondary rechargeable alkaline manganese (RAM) batteries also utilize graphite as the cathode material. While batteries store electrical energy for subsequent use, fuel cells also generate electricity through chemical reactions and therefore need to be periodically “refueled”. Fuel cells can be used in both stationary and mobile applications and use substantially more graphite than lithium ion batteries. Fuel cells are more efficient than combustion engines in converting fuel to energy. According to the United States Geological Survey, fuel cells have the potential to consume as much graphite as all other uses combined.

16.4 Other Uses for Graphite

Natural graphite in steelmaking mostly goes into carbon raising in molten steel, although it can be used to lubricate the dies used to extrude hot steel. A carbon raiser is added to increase the carbon content of the steel to the specified level. An estimate based on USGS statistics show that during 2005, the U.S. graphite consumption for steelmaking was 10,500 tonnes graphite.

Natural amorphous and fine flake graphite are used in brake linings or brake shoes as a substitute for asbestos for heavier (non-automotive) vehicles. The graphite lubricates, transfers the heat of friction away from the lining, and lowers the rate of wear (Kalyoncu, 2000). This use has been important for quite some time, but non-asbestos organic (NAO) compositions are beginning to cost graphite market share. According to the United States Geological Survey, U.S. natural graphite consumption in brake linings was 6,510 tonnes in 2005.

A foundry facing mould wash is a water-based paint of amorphous or fine flake graphite. Painting the inside of a mould with it and letting it dry leaves a fine graphite coat that will ease separation of the object cast after the hot metal has cooled. Graphite lubricants are specialty items for use at very high or very low temperatures, as forging die lubricant, an anti-seize agent, a gear lubricant for mining machinery and to lubricate locks. Having low-grit graphite, or no-grit graphite (ultra high purity), is highly desirable. It can be used as a dry powder, in water or oil, or as colloidal graphite (a permanent suspension in a liquid). An estimate based on United States Geological Survey graphite consumption statistics indicates that 2,200 tonnes was used in this fashion in 2005.

Natural graphite has found new uses in an advanced "pebble bed" nuclear reactor design that uses neither rods nor cooling towers, but instead inserts the radioactive uranium dioxide fuel as tiny flakes into a round graphite tennis-ball sized (pebble) shell coated in a number of chemical layers. The graphite in the pebbles is a mixture of 75% natural graphite and 25% synthetic (pyrolytic) graphite. The small uranium dioxide spheres are each coated with a layer of porous carbon, then high density pyrolytic carbon, silicon carbide, and then another layer of pyrolytic carbon. This is known as tristructural-isotropic (TRISO) fuel. A pebble bed reactor uses about 360,000 pebbles - three-fourths are fuel spheres and one-fourth are the combined natural and pyrolytic graphite. These balls are cycled continuously to check for any flaws or spent fuel. Typically, each pebble is cycled 10 to 15 times, making one total fuel load last just over 42 years. Natural graphite is also found in multiple other materials used in nuclear reactors including gaskets, sealants, and liners.

Graphene is produced when a graphite flake is delaminated to its lowest common denominator. It is a one atom thick, transparent, conductive sheet of carbon atoms arranged in hexagonal rings or a honeycomb pattern. Graphene's structure gives it unique optical, thermal, mechanical and electrical properties. It is stronger and more flexible than steel, conducts heat 10 times faster than copper and can carry 1,000 times the density of electrical current of copper wire. It is expected that graphene will be used in the evolution of LCD touch screen technology, the creation of super small transistors, super dense data storage, energy storage, and solar cells to name a few. Graphene is also being touted as the future for outer space. In 2010, graphene was the subject of about 3,000 research papers. The European Union and South Korea have recently started $1.5 billion efforts to build industrial scale, next generation display materials using graphene.

17 Interpretation and Conclusions

The Graphite Creek Property land package comprises 129 claims totaling 16,801 acres (6,799 hectares), essentially controlling all prospective lands of known graphite mineralization in the region. Graphite One's Property is located on the Seward Peninsula of Alaska, USA (Teller A-2 and A-1 Quadrangles), about 59 km north of Nome, Alaska, and offers significant potential for discovery and development of near-surface/exposed, large-flake, high-grade graphite. The Property is located on the north flank of the Kigluaik Mountains and is approximately 20 km from seasonal roads, 3 km inland from intertidal waters at Windy Cove (Imuruk Basin) and 3 km away from an airstrip.

The Graphite Creek Property comprises graphite-bearing amphibolite-facies schistose rocks within the lower Kigluaik Group. The graphitic schist occurs on the footwall side of the Kigluaik fault zone at the base of the Kigluaik Mountains. The fault zone strikes approximately 250º azimuth, dips 75º to the north and parallels the northern base of the Kigluaik Mountains. The graphite showings at the Graphite Creek Property were first discovered in the early 1900's. They comprise mainly segregations (lenses and streaks) of semi-massive to massive graphite, and disseminations, within the schistose rocks as: 1) massive graphite segregations in sillimanite-garnet-biotite-quartz schist; 2) graphitic sillimanite-garnet-biotite-quartz schist consisting of 15-60% graphite; and 3) graphitic biotite-quartz schist containing 1-10% disseminated graphite.

A helicopter-borne SkyTEM survey, totalling 1,523.5 line-kilometres, was collected in two phases during May 2012 and July-August 2012. The configuration of the surveys was planned to consist of 50 m traverse-lines oriented northeast-southwest (Az 065°) between tie-lines spaced 500 m apart and oriented northwest-southeast (Az 155°). Due to bad weather and logistical issues with the helicopter, not all of the lines could be flown during the second survey phase.

The geophysical data shows that the graphitic zone extends continually in a northeast-trending linear direction for approximately 18 km. The length is based on a continual, sharply contrasting high-EM anomaly, the location of which mimics historical mapping and the location of elevated geochemical graphite samples (both historically and those taken during the 2011 and 2012 exploration campaigns). The mapping and the EM data are particularly corroborative; high-grade graphtitic sillimanite-garnet-biotite-quartz schistose rocks that are exposed in incised creek valleys correlate well with the anomalous bands of high-magnetic data. The continuity of the EM data confirms historical mapper's suggestions that high-grade graphite is continuous in the sub-surface between creek bedrock exposures.

The high-EM/magnetic anomaly is particularly evident in the central part of the Property over a distance of 11.6 km. Some disruption in the distinctness of magnetic linear occurs at either end of the Property. In the southwestern part of the Property, the fabric along the main linear zone is discontinuous and it is possible that reorientation of the geological units and/or series of inferred lineaments disrupt the magnetic fabric. To the far northeast Property area, the magnetic signature changes such that this area must be underlain by a different geological substrate in comparison to the central and southwestern part of the Property.

2012 geological mapping, surface sampling and diamond drilling has confirmed the presence of graphitic mineralization at Graphite One Resources Inc.'s Graphite Creek Property. High-grade massive, segregated and disseminated graphite is associated with a series of sillimanite-garnet-biotite-quartz schist layers. Low- to moderate-grade disseminated graphite is hosted in biotite-quartz (±garnet) schist. Analyses of exposed bedrock from throughout the Property contains moderate to abundant graphite. Of the 591 grab samples collected in 2012, 11 samples yielded >45% Cg (up to 80.9% Cg), 47 samples had >10% Cg and 137 samples had >3% Cg. The 2012 rock sample results also show that graphite-bearing sillimanite-garnet-biotite-quartz schistose rocks continue outside the Maiden Inferred Resource Estimate area. For example, one sample collected in the eastern part of the Property contained 80.9% Cg from a 1.0 m by 3.0 m lens of graphite in moderately silicified schistose rocks. At higher elevations in the southern part of the Property, two samples contained 56.6% Cg and 61.1% Cg in graphite-rich segregated lenses that were 30-40 cm wide and up to 2 m long in sillimanite-garnet-biotite-quartz schist.

Graphite mineralization was encountered in all eighteen drillholes drilled during the 2012 exploration campaign. The graphite mineralization typically occurs throughout the length of the drill cores. For example, drillhole 12GC007 contains 4.02% Cg over 164 m between depths of 59 m and 223 m. The analytical results on drill core from the 18 drillholes include: 29 samples yielding >30% Cg; 208 samples with >10% Cg; and 1,249 samples containing >3% Cg. Examples of selected results from individual drillholes include:

- drillhole 12GC004: 48 m of 4.63% Cg with sub-intersections of 4.45 m of 10.86% Cg and 1.65 m of 21.85% Cg;
- drillhole 12GCH005: 173 m of 5.39% Cg with sub-intersections of 10.03% Cg over 55 m and 12.01% Cg over 42 m;
- drillhole 12GCH006: 147 m of 4.0% Cg with sub-intersections of 6.56% Cg over 58 m and 10.14% Cg over 32 m; and
- drillhole 12GC010: 173.55 m of 3.80% Cg with a sub-intersection of 20.55 m of 11.49% Cg

The host schist interval was historically reported to be about 100 m thick and exposed over dip lengths of 100 to 200 m. Based on results of a 2012 time-domain, helicopter-borne electromagnetic survey over the Graphite Creek Property, the drill-tested and proven graphitic conductor is now believed to strike continually for over 18 km while the depth of graphite-mineralization confirmed in drill core is in excess of 225 m.

Graphite flake size distribution shows that surficial rock grab and drill core samples contain between 59.3% and 93.6% large flake graphite (defined as graphite flake sizes that are greater than 80 mesh). The large flake graphite occurs mostly as liberated flakes/crystals together with less common intergrowths between the graphite and the other gangue schist components. The graphite is present as: minute scales or flakes; fine, undulated stringers along schist planes; liberated lath-shaped or tabular-foliated crystals; or as blocky and irregular deformed particles.

The maiden mineral resource estimate for Graphite Creek was prepared by Claude Duplessis, Eng., consultant for SGS Canada Inc. ("SGS"), and an independent Qualified Person under National Instrument (NI) 43-101, using the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") Standards on Mineral Resources and Reserves, Definitions and Guidelines.

Seventeen of 18 diamond drillholes completed during Graphite One's 2012 exploration campaign were used to guide the geological interpretation and the Maiden Inferred Graphite Creek Resource estimation in this Technical Report. Consequently the resource estimate area only represents a small subset portion (approximately 8%) of the total Graphite Creek Property.

The data was imported into MICROMINE mining software, which included collar easting, northing and elevation coordinates, lithology information, bulk density (specific gravity) data, down hole surveys and assay data (graphitic carbon; % Cg). The graphite Creek assay file comprised 4,106 analyses of variable length from all of the sampled lithologies. The diamond drilling was completed on drill sections that varied from 50 m to 320 m separation. All drillholes were drilled at approximately -50º to the southeast (approximately 160º magnetic azimuth), with the exception of one drill hole where it was drilled using a dip of -87º. The initial setup of the drillholes was established using a compass and clinometer and the drillhole orientation was monitored using a digital multi-shot downhole survey camera.

The lode interpretation of the mineralized envelopes was carried out on drillhole cross sections which incorporated the geological mapping in the interpretation process. The mineralized envelopes were then converted to 3-dimensional solids using commercial mine planning software MICROMINE (v12.5.4). All mineralized envelopes were either truncated at the overburden or topographic surfaces. The mineralized lodes extended far enough past the 2012 drill holes to ensure they were captured. The approximate resource dimensions comprise of 2.2 km of strike length, 140 to 230 m thickness and up to 420 m extension below the surface. These mineralized envelopes were then imported into GENESIS software where the estimation and geostatistical analysis was completed.

The raw assay sample widths ranged from 0.23 m to 3.97 m, which were then composited into a regular sample size of 2 m to support the anticipated block size that was used in the resource estimation. GENESIS was used to calculate the composites that were situated within the mineralized envelopes, which resulted in a total of 920 composites that were used for the final estimation.

The spatial continuity of the % graphite was reviewed using a combination of geostatistical analysis and calculated variograms. Nominal ranges were used for the estimation process based on the drill hole spacing and observations of geological continuity in the field. A regularised block model was created within the mineralized envelopes that comprised a parent block size of 5 m X by 2 m Y by 5 m Z. No sub-blocking was applied to the block model. A conservative nominal density (specific gravity) of 2.7 kg/m^3 was used to calculate the tonnage of the resource area, which was derived from 4,104 core and rock grab measurements, collected using the air/water displacement method.

Based on geostatistical analysis of the % graphite and independent inspection and sampling by Mr. C. Duplessis it was decided that no capping should be applied to the composited samples. As % graphite is the only element of interest, graphite was the only element calculated during this resource estimation. The grade was estimated using inverse distance to the power of two in three separate passes. The search ellipsoid was increased with each pass.

The base case cut-off grade of 3% Cg is based on a conservative approach of 80% recovery for a 95% Graphite concentrate with average selling price of $1200/tonne. Economic criteria for selection of the 3.0% block cut off for the resource block model uses a 3 year trailing average price from the industrial minerals web site. The assumption is the distribution of final product of 1/3 low value (800$/tonne), 1/3 medium value (1,200$/tonne) and 1/3 high value (1,600$/tonne). A mining cost of 5$/tonne plus a processing cost of 18$/tonne, plus 5$/tonne for G&A, plus 2$/tonne environmental, totals 30$/tonne. This reflects a 3% cut-off grade based on 1,200$/tonne selling price (all expressed in USD$). As the graphitic mineralization is outcropping on the hill side, a very low waste to ore ratio is envisaged for an open cut mining operation. Based on the above cut-offs and graphite mining and processing costs, the author, Mr. C. Duplessis feels it is justifiable to use a reporting cut-off value of 3.0% Cg in this Technical report.

The Graphite Creek maiden inferred resource has been classified as inferred. An 'Inferred Mineral Resource' is that part of a Mineral Resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes.

A sensitivity analysis of the resource showing the expected tonnes, graphite % concentration and anticipated tonnes of in situ graphite at different graphite % cut-offs is presented in Table 25. The maiden (initial 2012) inferred resource estimate of the Graphite Creek Property uses a cut-off grade of 3.0% Cg and includes 107.2 million tonnes of mineralized graphite at a graphite grade of 5.78% Cg. Based on this tonnage and grade, the in situ graphite is 6.2 million tonnes. The size and estimated in situ graphite tonnage is considered to display sufficiently high enough concentrations to be deemed to represent potential for future economic extraction. It should be noted that the resource is completely open along strike on both ends and open down dip from the existing drilling.

Mineral resources are not mineral reserves and do not have demonstrated economic viability. The estimate of mineral resources may be materially affected by geology, environmental, permitting, legal, taxation, socio-political, marketing or other relevant issues. The quality and grade of the reported inferred resource in this estimation is uncertain in nature and there has been insufficient exploration to define these inferred resources as an indicated or measured mineral resource, and it is uncertain if further exploration will result in upgrading them to an indicated or measured resource category.

Table 25. Graphite Creek Maiden Inferred Resource estimate reported at cut-offs of 2.0%, 3.0%, 5.0%, 7.0% and 10.0% graphitic carbon. The recommended inferred resource is at a cut-off of 3.0 graphitic carbon.

Cut-off grade (% Cg [1]) by LECO	Tonnage (million)	Graphite % (Cg) by LECO	In situ graphite (metric tonnes [3])
2.0	164.5	4.61	7,583,450
3.0 [2]	**107.2**	**5.78**	**6,196,160**
5.0	54.98	7.66	4,211,468
7.0	25.44	9.69	2,465,136
10.0	7.8	13.49	1,052,220

[1] Cg - graphitic carbon
[2] This inferred resource recommends using a 3.0% Cg cut-off
[3] metric tonne = 1,000 kg (2,204.6 lbs)

Note 1: The resource estimate does not include the graphite schist intersected in the drillhole 12GCH0008 located 2.2 km southwest of the Graphite Creek Maiden Inferred Resource area.

The 18th and last drillhole drilled during the 2012 campaign represents a single 'step-out' drillhole, 12GCH008, that was drilled about 2.2 km west of the main drill cluster and maiden resource estimate area. Drill core analysis from 12GCH008 yielded 6.02% Cg over 52 m and 7.07% Cg over 31 m. This provides evidence that the graphite mineralization continues outside of the resource estimate area; presuming that the extended mineralization corroborates with the geophysical anomaly, the graphite mineralization could extend to the southwest and possibly, along the entire length of the 18 km anomaly.

Graphite mineralization in the step-out drillhole 12GCH008, together with airborne geophysical, surface mapping and sampling, provide evidence that the graphite mineralization extends on surface and at depth along strike to include a southwesterly extension of the current Maiden Inferred Graphite Creek resource estimate area.

In a preliminary fashion, therefore, the approximate tonnage and grade of a potential resource extension can be determined by taking the results from drillhole 12GCH008 (52 m of 6.09% Cg) plus or minus 30 per cent grade, and considering the strike extent from the existing inferred resource. Using estimated tonnages and grades of 235-492 million tonnes and 4.2-7.9% Cg, respectively, the potential in situ graphite of 9.9-38.9 million tonnes might be present if the Maiden Inferred Graphite Creek Resource estimate is extrapolated to the southwest.

18 Recommendations

Follow-up exploration at the Graphite Creek Property is highly recommended based on results from: 1) historic work; 2) the 2012 airborne geophysical survey; 3) surficial rock grab and channel samples; 4) Property geological mapping and observations; 5) flake size distribution analyses; 6) drilling; and, 7) a sizeable maiden inferred resource as documented in this Technical Report.

The total cost to complete a recommended 2013 exploration program is USD$9,100,000 (not including contingency). With a 10% contingency the total budget is USD$10,010,000 (Table 26). The recommendations include but not are limited to:

1) Complete infill drilling in the Graphite Creek Maiden Inferred Resource estimate area at a drill spacing that is sufficient to work towards a refined indicated and/or measured resource estimate, which will be part of a Preliminary Economic Assessment (PEA) study. This should include approximately 8,000 m of drilling or sixty-five 120 m deep drillholes. The drillholes should be completed at 50 m spacing and every section should have at least 2 holes. As well, approximately 4 reconnaissance drill holes should be completed along the EM anomaly to test the grade and depth extent of the mineralization along the 18 km long geophysical trend. The approximate cost to complete the drilling is USD$4,800,000;

2) Complete detailed mineralogy and metallurgical testing both at bench scale and mini-test plant scale. The testing should be completed from in-situ material (witness core and rejects and mini-bulk surface samples) to produce graphite concentrates to evaluate the potential quality and recovery rates for a saleable graphite product. The characteristics should allow an appraisal of value within the market and assist in the completion of a PEA. As well, homogenized mineralized and non-mineralized sample standards should be sourced for future resource work. The estimated budget to complete the mineralogy and metallurgy is approximately USD$1,200,000;

3) Complete baseline environmental studies at and near the Property (USD$600,000);

4) Complete engineering studies as part of the PEA (USD$500,000). The study should look at logistics, mine planning, infrastructure, mining, milling and processing, etc.;

5) Initiate permitting in anticipation of mine development including community consultations and relations (USD$500,000); and,

6) The comprehensive 2013 program management, consulting contracts and reporting (PEA, updated resource, NI 43-101's) have an estimated budget of USD$1,500,000.

Table 26. Recommended 2013 exploration program budget at the Graphite Creek Property.

No.	Item	Description	Cost $USD
1	Drilling	8,000 meters to make an indicated & measured resource and test the EM Anomaly along strike	$4,800,000
2	Mineralogy/metallurgy	Bench scale and larger scale testing to determine the characteristics and appraisal of a saleable graphite concentrate from the Property	$1,200,000
3	Environmental	Baseline studies to be included as part of the Preliminary Economic Assessment	$600,000
4	Engineering	Logistics, mining, milling & processing etc.	$500,000
5	Permitting	Initial permitting towards developing a mine at the Property including community consultation and relations	$500,000
6	Project management; consulting & reporting	Updated resource reports; NI 43-101; Preliminary Economic Assessment and overall project management	$1,500,000
	CONTINGENCY (10%)		$910,000
		TOTAL ESTIMATED COST – 2013 EXPLORATION	**$10,010,000**

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20 Certificates of Authors

Certificate of Qualified Person

I, Claude Duplessis Eng., do herby certify that:

1. I am a senior engineer and consultant with SGS Canada Inc. – Geostat with an office at 10, Blvd de la Seigneurie East, Suite 203, Blainville, Quebec, Canada, J7C 3V5;

2. This certificate is to accompany the Report entitled: "Technical Report, Maiden Inferred Resource Estimate of the Graphite Creek Property, Alaska USA", which was prepared for Graphite One Resources Inc., dated January 18th 2013.

3. I am a graduate from the University of Quebec in Chicoutimi, Quebec in 1988 with a B.Sc.A in geological engineering and I have practiced my profession continuously since that time, I am a registered member of the Ordre des ingénieurs du Québec (Registration Number 45523). I am also a registered engineer in the province of Alberta (Registration Number M77963). I have worked as an engineer for a total of 24 years since my graduation. My relevant experience for the purpose of the Technical Report is: Over 20 years of consulting in the field of Mineral Resource estimation, orebody modeling, mineral resource auditing and geotechnical engineering. I have specific experience in modelling and estimation of graphite resources for Northern Graphite's Bissett Creek project.

4. I did the personal inspection of the Graphite Creek property and facilities in Nome from October 30th to November 2nd 2012.

5. I am responsible with the other authors either singularly or jointly for the report entitled: "Technical Report, Maiden Inferred Resource Estimate of the Graphite Creek Property, Alaska USA" which was prepared for Graphite One Resources Inc., dated January 18th 2013.

6. I am an independent "qualified person" within the meaning of National Instrument 43-101 – Standards of Disclosure for Mineral Projects of the Canadian Securities Administrators. I have had no prior involvement with the Property that is the subject of this Technical Report. I certify that there is no circumstance that could interfere with my judgment regarding the preparation of this Technical Report.

7. I have read NI 43-101 and Form 43-101F1 and have prepared and read the report entitled: "Technical Report, Maiden Inferred Resource Estimate of the Graphite Creek Property, Alaska USA" which was prepared for Graphite One Resources Inc., dated January 18th 2013, in compliance with NI 43-101 and Form 43-101F1.

Signed at Blainville, Quebec this January 18th 2013

Signed and Sealed

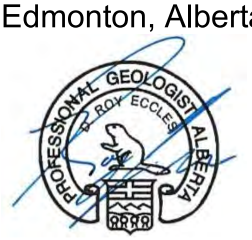
Claude Duplessis Eng. Effective Date: December 3rd

Certificate of Qualified Person

I, D. Roy Eccles, P.Geol., do here by certify that:

1. I am a Senior Consulting Geologist and Operations Manager of APEX Geoscience Ltd., Suite 200, 9797 – 45th Avenue, Edmonton, Alberta T6E 5V8
2. I graduated with a B.Sc. in Geology from the University of Manitoba in Winnipeg, Manitoba in 1986 and with a M.Sc. in Geology from the University of Alberta in Edmonton, Alberta in 2004.
3. I am and have been registered as a Professional Geologist with the Association of Professional Engineers and Geoscientists ("APEGA") of Alberta since 2003.
4. I have worked as a geologist for more than 25 years since my graduation from University and have been involved in all aspects of mineral exploration and mineral resource estimations for metallic and industrial mineral projects and deposits in Canada.
5. I have read the definition of "Qualified Person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43-101.
6. I am responsible for and have supervised the preparation of the "*Technical Report, Maiden Inferred Resource Estimate of the Graphite Creek Property, Alaska, USA"*, with an effective date of January 18th 2013 (the "Technical Report"). I visited the Graphite Creek Property May 8-9, 2012.
7. To the best of my knowledge, information and belief, the Technical Report contains all relevant scientific or technical information that is required to be disclosed, to make the Technical Report not misleading.
8. I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form. I am independent of the issuer, the vendor and the Property applying all of the tests in section 1.5 of both NI 43-101 and 43-101CP.
9. I have not had any prior involvement with the Property that is the subject of the Technical Report.
10. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files or their websites.

Dated this January 18th 2013
Edmonton, Alberta, Canada



D. Roy Eccles, M.Sc., P.Geol.

Certificate of Qualified Person

I, Steven J. Nicholls, MAIG., do here by certify that:

1. I am currently employed as a Resource Geologist with:
   APEX Geoscience Australia Pty Ltd.
   39B Kensington St
   East Perth WA Australia 6004
2. I graduated with a Bachelor of Applied Science (BASc.) in Geology, received from the University of Ballarat, Victoria, Australia in 1997.
3. My professional affiliation is member of the Australian Institute of Geoscientists, Australia ("AIG").
4. I have worked as a geologist for more than 13 years since my graduation from university.
5. I have read the definition of "Qualified Person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43-101.
6. I, along with my co-authors Claude Duplessis, Eng., and Roy Eccles, M.Sc., P.Geol., am responsible for the preparation of the "*Technical Report, Maiden Inferred Resource Estimate of the Graphite Creek Property, Alaska, USA"*, with an effective date of January 18th 2013 (the "Technical Report"). I visited the Graphite Creek Property October 30th to November 2nd, 2012.
7. I am not aware of any scientific or technical information with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.
8. I am independent of the issuer applying all of the tests in section 1.5 of both NI 43-101 and 43-101CP.
9. I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
10. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files or their websites.

Dated this January 18th 2013
Edmonton, Alberta, Canada

Steven J. Nicholls, BASc., MAIG.

Appendix 1. 2011 and 2012 Expenses

2011 Graphite Creek Property Expenditures

Transportation	$9,520.00	
Accommodation/food	$1,490.00	
Personnel	$5,500.00	
Fuel	$976.25	
Rock analysis and shipping	$20,300.00	
	Total	**CND$37,786.25**

2012 Graphite Creek Property Expenditures

Transportation	$70,569.10	
Accommodation/Rent	$132,430.00	
Personnel	$1,135,546.61	
Airborne geophysics	$338,346.50	
Drilling and related	$1,135,015.28	
Helicopter/aircraft	$884,070.90	
Fuel - Jet	$216,710.74	
Freight	$127,118.47	
Rock analysis	$360,181.03	
Equipment/misc. supplies	$398,778.38	
	Total	**$4,798,767.01**
	Total Sum	**CND$4,836,553.26**

Appendix 2. Rock Sample Laboratory Certificates

The following data are on file at APEX Geoscience Ltd. and Graphite One Resources Inc., and are available upon request:

- 2011 Rock Sample Laboratory Certificates
- 2012 Author Field Visit Laboratory Certificates
- 2012 Exploration Program; Rock Sample Laboratory Certificates
- 2012 Exploration Program; Drill Core Laboratory Certificates

Appendix 3. 2012 Exploration Program; Rock Grab and Channel Samples

Sample ID	Easting (m) Z3 NAD83	Northing (m) Z3 NAD83	Area	Lithology	Specific gravity (g/cm³)	Graphitic carbon (%)
12ADP001	474342	7212677	Graphite Creek	Bt-Qtz Schist	2.719	0.23
12ADP002	474378	7212705	Graphite Creek	Bt-Qtz Schist	2.823	2.43
12ADP003	474503	7212745	Graphite Creek	Bt-Qtz Schist	2.731	0.05
12ADP004	474660	7212848	Graphite Creek	Bt-Qtz Schist	2.83	2.59
12ADP005	474673	7212857	Graphite Creek	Bt-Qtz Schist	2.422	50.9
12ADP006	474642	7212877	Graphite Creek	Bt-Qtz Schist	2.742	4.86
12ADP007	474647	7212898	Graphite Creek	Bt-Qtz Schist	2.713	0.05
12ADP008	475844	7213330	Graphite Creek	Bt-Qtz Schist	2.736	0.15
12ADP009	475716	7213524	Graphite Creek	Bt-Qtz Schist	2.605	0.11
12ADP010	475703	7213536	Graphite Creek	Bt-Qtz Schist	2.752	0.91
12ADP011	475964	7213406	Graphite Creek	Bt-Qtz Schist	2.647	0.43
12ADP012	474004	7212431	Graphite Creek	Bt-Qtz Schist	2.73	3.76
12ADP013	473970	7212355	Graphite Creek	Bt-Qtz Schist	2.57	0.54
12ADP014	473931	7212329	Graphite Creek	Bt-Qtz Schist	2.634	2.75
12ADP015	473859	7212516	Graphite Creek	Bt-Qtz Schist	2.685	0.14
12ADP016	473858	7212542	Graphite Creek	Bt-Qtz Schist	2.673	1.87
12ADP017	473860	7212585	Graphite Creek	Bt-Qtz Schist	2.788	0.54
12ADP018	473830	7212652	Graphite Creek	Bt-Qtz Schist	3.019	0.05
12ADP019	473830	7212667	Graphite Creek	Graphite Pod/Sheet	2.494	45.1
12ADP020	473988	7211492	Glacier Canyon Creek	Bt-Qtz Schist	2.521	1.05
12ADP021	473742	7211456	Glacier Canyon Creek	Bt-Qtz Schist	2.704	0.35
12ADP022	473520	7211532	Glacier Canyon Creek	Bt-Qtz Schist	2.72	0.11
12ADP023	473480	7211709	Glacier Canyon Creek	Bt-Qtz Schist	2.668	0.32
12ADP024	473389	7211921	Glacier Canyon Creek	Bt-Qtz Schist	2.69	0.43
12ADP025	473335	7212053	Glacier Canyon Creek	Bt-Qtz Schist	2.62	0.53
12ADP026	473299	7212213	Glacier Canyon Creek	Marble	2.742	1.68
12ADP027	473218	7212188	Glacier Canyon Creek	Bt-Qtz Schist	2.555	0.42
12ADP028	473106	7211930	Trail Creek	Bt-Qtz Schist	2.518	0.2
12ADP029	473143	7212003	Trail Creek	Bt-Qtz Schist	2.667	0.27
12ADP030	472939	7211905	Trail Creek	Grt-Bt-Qtz Schist	2.663	0.93
12ADP031	472932	7211902	Trail Creek	Bt-Qtz Schist	2.697	0.18
12ADP032	472986	7211986	Trail Creek	Bt-Qtz Schist	2.813	0.34
12ADP033	472906	7211955	Trail Creek	Qtz-Diorite	2.614	0.05
12ADP034	472825	7211952	Trail Creek	Bt-Qtz Schist	2.617	13.5
12ADP035	472797	7211985	Trail Creek	Bt-Qtz Schist	2.557	2.83
12ADP036	472802	7212107	Trail Creek	Bt-Qtz Schist	2.738	0.05
12ADP037	472831	7211766	Trail Creek	Bt-Qtz Schist	2.606	2.14
12ADP038	472750	7211895	Trail Creek	Bt-Qtz Schist	2.551	0.64
12ADP039	472710	7211918	Trail Creek	Sill-Grt-Bt-Qtz Schist	3.005	2.35
12ADP040	472681	7212005	Trail Creek	Graphite Sheet	2.464	30
12ADP041	472653	7212026	Trail Creek	Bt-Qtz Schist	2.621	2.73
12ADP042	472590	7212106	Trail Creek	Bt-Qtz Schist	2.843	0.48
12ADP043	473058	7212277	Glacier Canyon Creek	Bt-Qtz Schist	2.315	3.15
12ADP044	473145	7212078	Glacier Canyon Creek	Bt-Qtz Schist	2.877	0.05
12ADP045	473173	7212143	Glacier Canyon Creek	Bt-Qtz Schist	2.606	27.8
12ADP046	473200	7212229	Glacier Canyon Creek	Bt-Qtz Schist	2.563	2.01
12ADP047	473278	7212391	Glacier Canyon Creek	Marble	2.729	1.39
12ADP048	473302	7212429	Glacier Canyon Creek	Bt-Qtz Schist	2.597	1.74
12ADP049	473291	7212364	Glacier Canyon Creek	Bt-Qtz Schist	2.725	0.09
12ADP050	471770	7211726	Toby Drainage	Bt-Qtz Schist	2.703	0.05
12ADP051	472001	7211605	Toby Drainage	Sill-Grt-Bt-Qtz Schist	2.823	0.05
12ADP052	472038	7211561	Toby Drainage	Bt-Qtz Schist	2.613	3.13
12ADP053	472027	7211591	Toby Drainage	Sill-Grt-Bt-Qtz Schist	2.711	1.31
12ADP054	472010	7211642	Toby Drainage	Bt-Qtz Schist	2.695	1.72
12ADP055	471995	7211698	Toby Drainage	Sill-Grt-Bt-Qtz Schist	2.803	1.8
12ADP056	471976	7211737	Toby Drainage	Sill-Grt-Bt-Qtz Schist	2.776	1.42
12ADP057	471959	7211711	Toby Drainage	Bt-Qtz Schist	2.669	2.17
12ADP058	471910	7211702	Toby Drainage	Bt-Qtz Schist	2.657	1.83
12ADP059	471998	7211743	Toby Drainage	Sill-Grt-Bt-Qtz Schist	2.589	0.77
12ADP060	471870	7211814	Toby Drainage	Bt-Qtz Schist	2.64	1.19
12ADP061	471643	7211438	Child Drainage	Qtz-Diorite	2.582	0.09

Sample ID	Easting (m) Z3 NAD83	Northing (m) Z3 NAD83	Area	Lithology	Specific gravity (g/cm³)	Graphitic carbon (%)
12ADP062	471645	7211439	Child Drainage	Bt-Qtz Schist	2.623	1.52
12ADP063	471700	7211527	Child Drainage	Bt-Qtz Schist	2.687	1.74
12ADP064	471715	7211506	Child Drainage	Sill-Grt-Bt-Qtz Schist	2.832	0.19
12ADP065	471706	7211570	Child Drainage	Bt-Qtz Schist	2.746	0.48
12ADP066	471714	7211568	Child Drainage	Qtz-Diorite	2.627	0.05
12ADP067	471713	7211610	Child Drainage	Sill-Grt-Bt-Qtz Schist	2.571	0.78
12ADP068	471702	7211674	Child Drainage	Sill-Grt-Bt-Qtz Schist	2.768	2.27
12ADP069	471714	7211717	Child Drainage	Sill-Grt-Bt-Qtz Schist	2.387	39.2
12ADP070	471703	7211716	Child Drainage	Sill-Grt-Bt-Qtz Schist	2.482	21.7
12ADP071	471711	7211758	Child Drainage	Bt-Qtz Schist	2.699	0.09
12ADP072	471636	7211839	Child Drainage	Sill-Grt-Bt-Qtz Schist	2.415	16.1
12ADP073	471921	7211389	Child Drainage	Qtz-Diorite	2.567	0.05
12ADP074	471925	7211393	Child Drainage	Bt-Qtz Schist	2.557	2
12ADP075	471902	7211404	Child Drainage	Sill-Grt-Bt-Qtz Schist	2.752	2.05
12ADP076	471889	7211457	Child Drainage	Bt-Qtz Schist	2.661	0.13
12ADP077	471872	7211488	Child Drainage	Sill-Grt-Bt-Qtz Schist	2.654	0.34
12ADP078	471788	7211612	Child Drainage	Bt-Qtz Schist	2.563	3.52
12ADP079	471772	7211631	Child Drainage	Sill-Grt-Bt-Qtz Schist	2.695	0.87
12ADP080	471742	7211747	Child Drainage	Bt-Qtz Schist	2.546	3.36
12ADP081	476916	7211538	Cobblestone South	Sill-Grt-Bt-Qtz Schist	2.81	0.05
12ADP082	477025	7211484	Cobblestone South	Bt-Qtz Schist	2.742	0.16
12ADP083	476304	7211585	Cobblestone South	Sill-Grt-Bt-Qtz Schist	2.815	0.05
12ADP084	476573	7211778	Cobblestone South	Sill-Grt-Bt-Qtz Schist	2.698	0.05
12ADP085	476881	7212033	Cobblestone South	Sill-Grt-Bt-Qtz Schist	2.711	0.05
12ADP086	477052	7212125	Cobblestone South	Sill-Grt-Bt-Qtz Schist	2.809	0.05
12ADP087	476990	7211740	Cobblestone South	Sill-Grt-Bt-Qtz Schist	2.554	0.12
12ADP088	475303	7211410	Cobblestone South	Qtz-Diorite	2.69	0.05
12ADP089	475411	7211357	Cobblestone South	Bt-Qtz Schist	2.933	1.09
12ADP090	475492	7211370	Cobblestone South	Sill-Grt-Bt-Qtz Schist	2.651	0.83
12ADP091	475540	7211395	Cobblestone South	Qtz-Diorite	2.648	0.28
12ADP092	475540	7211395	Cobblestone South	Sill-Grt-Bt-Qtz Schist	2.752	1.21
12ADP093	475548	7211399	Cobblestone South	Marble	2.758	1.94
12ADP094	479056	7214488	CobblestoneEast	Bt-Qtz Schist	2.667	3.4
12ADP095	479063	7214595	CobblestoneEast	Sill-Grt-Bt-Qtz Schist	2.549	4.61
12ADP096	479048	7214665	CobblestoneEast	Sill-Grt-Bt-Qtz Schist	2.842	0.05
12ADP097	479043	7214665	CobblestoneEast	Graphite Lense in Sill-Grt-Bt-Qtz Schist	2.436	45.4
12ADP098	480070	7212382	CobblestoneEast	Bt-Qtz Schist	2.768	0.05
12ADP099	480523	7212123	CobblestoneEast	Basalt	2.735	0.05
12ADP100	480607	7212436	CobblestoneEast	Qtz-Diorite	2.58	0.05
12ADP101	480610	7212484	CobblestoneEast	Bt-Qtz Schist	2.724	0.1
12ADP102	480602	7212569	CobblestoneEast	Sill-Grt-Bt-Qtz Schist	2.817	1.64
12ADP103	480447	7212359	CobblestoneEast	Marble	2.828	0.56
12ADP104	480448	7212360	CobblestoneEast	Sill-Grt-Bt-Qtz Schist	2.799	0.05
12ADP105	480514	7212587	CobblestoneEast	Qtz-Diorite	2.631	0.05
12ADP106	480528	7212625	CobblestoneEast	Bt-Qtz Schist	2.765	0.69
12ADP107	480534	7212633	CobblestoneEast	Sill-Grt-Bt-Qtz Schist	3.09	4.68
12ADP108	480560	7212650	CobblestoneEast	Bt-Qtz Schist	2.698	0.24
12ADP109	480485	7212674	CobblestoneEast	Bt-Qtz Schist	2.765	0.05
12ADP110	480494	7212689	CobblestoneEast	Sill-Grt-Bt-Qtz Schist	2.752	2.02
12ADP111	480494	7212689	CobblestoneEast	Grt-Rich Lense in Sill-Grt-Bt-Qtz Schist	2.741	9.62
12ADP112	480486	7212762	CobblestoneEast	Graphite Lense in	2.217	80.9
12ADP113	480486	7212762	CobblestoneEast	Sill-Grt-Bt-Qtz Schist	2.914	2.53
12ADP114	478770	7213527	Cobblestone East	Bt-Qtz Schist	2.68	0.21
12ADP115	478675	7213240	Cobblestone East	Bt-Qtz Schist	2.659	0.08
12ADP116	478640	7213105	Cobblestone East	Bt-Qtz Schist	2.794	0.16
12ADP117	478702	7213086	Cobblestone East	Marble	2.714	0.8
12ADP118	478701	7213089	Cobblestone East	Bt-Qtz Schist	2.805	0.13
12ADP119	478819	7212995	Cobblestone East	Bt-Qtz Schist	2.733	0.05
12ADP120	478890	7212820	Cobblestone East	Qtz-Diorite	2.779	0.05
12ADP121	478545	7212824	Cobblestone East	Qtz-Diorite	2.616	0.08
12ADP122	478485	7212870	Cobblestone East	Bt-Qtz Schist	2.762	0.14

Sample ID	Easting (m) Z3 NAD83	Northing (m) Z3 NAD83	Area	Lithology	Specific gravity (g/cm³)	Graphitic carbon (%)
12ADP123	478489	7212749	Cobblestone East	Bt-Qtz Schist	2.778	0.05
12ADP124	475250	7211767	Cobblestone South	Qtz-Diorite	2.545	0.05
12ADP125	474499	7210749	Cobblestone South	Bt-Qtz Schist	2.771	0.2
12ADP126	474506	7210755	Cobblestone South	Sill-Grt-Bt-Qtz Schist	2.941	8.96
12ADP127	474484	7210690	Cobblestone South	Bt-Qtz Schist	2.737	0.43
12ADP128	476007	7210382	Cobblestone South	Qtz-Diorite	2.588	0.05
12ADP129	476010	7210386	Cobblestone South	Bt-Qtz Schist	2.926	0.05
12ADP130	476507	7210411	Cobblestone South	Gneiss	2.661	0.05
12ADP131	476926	7213268	Cobblestone Step	Sill-Grt-Bt-Qtz Schist	2.543	1.63
12ADP132	477022	7213343	Cobblestone Step	Bt-Qtz Schist	2.629	0.33
12ADP133	476993	7213269	Cobblestone Step	Bt-Qtz Schist	2.502	6.3
12ADP134	477178	7213118	Cobblestone Step	Sill-Grt-Bt-Qtz Schist	2.783	2.61
12ADP135	477389	7213232	Cobblestone Step	Sill-Grt-Bt-Qtz Schist	2.807	1.52
12ADP136	477389	7213231	Cobblestone Step	Bt-Qtz Schist	2.66	0.06
12ADP137	477549	7213379	Cobblestone Step	Bt-Qtz Schist	2.633	0.28
12ADP138	477081	7213423	Cobblestone Step	Sill-Grt-Bt-Qtz Schist	2.758	0.3
12ADP139	477099	7213410	Cobblestone Step	Bt-Qtz Schist	2.503	1.32
12ADP140	477112	7213509	Cobblestone Step	Bt-Qtz Schist	2.493	1.33
12ADP141	477165	7213460	Cobblestone Step	Sill-Grt-Bt-Qtz Schist	2.799	1.51
12ADP142	477356	7213593	Cobblestone Step	Sill-Grt-Bt-Qtz Schist	2.792	0.15
12ADP143	477223	7213733	Cobblestone Step	Bt-Qtz Schist	2.549	4.05
12ADP144	477103	7213766	Cobblestone Step	Bt-Qtz Schist	2.526	0.52
12ADP145	476963	7213811	Cobblestone Step	Bt-Qtz Schist	2.531	1.04
12ADP146	476881	7213717	Cobblestone Step	Bt-Qtz Schist	2.583	2.22
12ADP147	476988	7213624	Cobblestone Step	Sill-Grt-Bt-Qtz Schist	2.69	0.61
12ADP148	477013	7213663	Cobblestone Step	Qtz-Diorite	2.653	0.89
12ADP149	471116	7210573	Hot Springs Creeks	Bt-Qtz Schist	2.8	2.22
12ADP150	471034	7210771	Hot Springs Creeks	Bt-Qtz Schist	2.534	1.86
12ADP151	471030	7210867	Hot Springs Creeks	Qtz-Diorite	2.605	0.45
12ADP152	471024	7210866	Hot Springs Creeks	Bt-Qtz Schist	2.568	3.33
12ADP153	471015	7210873	Hot Springs Creeks	Marble	2.731	1.28
12ADP154	471009	7210912	Hot Springs Creeks	Qtz-Diorite	2.526	1.24
12ADP155	471039	7211025	Hot Springs Creeks	Bt-Qtz Schist	2.605	4.25
12ADP156	471005	7211080	Hot Springs Creeks	Marble	2.678	0.53
12ADP157	471024	7211126	Hot Springs Creeks	Sill-Grt-Bt-Qtz Schist	2.858	1.39
12ADP158	471016	7211283	Hot Springs Creeks	Sill-Grt-Bt-Qtz Schist	2.997	2.32
12ADP159	470899	7211099	Hot Springs Drainage	Bt-Qtz Schist	2.534	4.02
12ADP160	470945	7211136	Hot Springs Drainage	Sill-Grt-Bt-Qtz Schist	2.76	1.83
12ADP161	470966	7211176	Hot Springs Drainage	Sill-Grt-Bt-Qtz Schist	2.608	1.73
12ADP162	470964	7211184	Hot Springs Drainage	Graphite/Garnet Pod	3.169	16.1
12ADP163	470978	7211208	Hot Springs Drainage	Bt-Qtz Schist	2.722	0.61
12ADP164	471006	7211256	Hot Springs Drainage	Bt-Qtz Schist	2.611	3.32
12ADP165	470955	7211237	Hot Springs Drainage	Sill-Grt-Bt-Qtz Schist	2.854	0.05
12ADP166	470866	7211280	Hot Springs Drainage	Sill-Grt-Bt-Qtz Schist	3.319	2.17
12ADP167	470871	7211298	Hot Springs Drainage	Bt-Qtz Schist	2.722	0.26
12ADP168	470884	7211358	Hot Springs Drainage	Bt-Qtz Schist	2.612	2.38
12ADP169	470866	7211365	Hot Springs Drainage	Sill-Grt-Bt-Qtz Schist	2.643	2.03
12ADP170	470358	7211007	Christophosen Creek	Bt-Qtz Schist	2.45	5.58
12ADP171	470364	7211043	Christophosen Creek	Sill-Grt-Bt-Qtz Schist	3.193	8.37
12ADP172	470368	7211092	Christophosen Creek	Graphite Pod	2.436	23.1
12ADP173	470846	7211429	Christophosen Creek	Sill-Grt-Bt-Qtz Schist	3.005	1.25
12ADP174	470833	7211418	Christophosen Creek	Graphite Pod	2.458	36.2
12ADP175	470801	7211506	Christophosen Creek	Bt-Qtz Schist	2.517	3.74
12ADP176	470347	7211599	Christophosen Creek	Sill-Grt-Bt-Qtz Schist	2.602	7.68
12ADP177	470329	7211532	Christophosen Creek	Sill-Grt-Bt-Qtz Schist	2.656	0.7
12ADP178	470329	7211532	Christophosen Creek	Graphite Pod	2.987	32.6
12ADP179	470311	7211562	Christophosen Creek	Sill-Grt-Bt-Qtz Schist	2.776	2.67
12ADP180	470241	7211481	Christophosen Creek	Sill-Grt-Bt-Qtz Schist	2.565	2.25
12ADP181	470200	7211464	Christophosen Creek	Graphite Pod/Lense	2.481	33.1
12ADP182	470117	7211383	Christophosen Creek	Sill-Grt-Bt-Qtz Schist	2.559	1.73
12ADP183	469699	7210884	Guiness Drainage	Sill-Grt-Bt-Qtz Schist	2.726	0.06

Sample ID	Easting (m) Z3 NAD83	Northing (m) Z3 NAD83	Area	Lithology	Specific gravity (g/cm³)	Graphitic carbon (%)
12ADP184	469658	7210934	Guiness Drainage	Bt-Qtz Schist	2.741	0.34
12ADP185	469565	7210970	Guiness Drainage	Sill-Grt-Bt-Qtz Schist	2.7	4.24
12ADP186	469588	7211066	Guiness Drainage	Bt-Qtz Schist	2.602	2.8
12ADP187	469500	7211080	Guiness Drainage	Sill-Grt-Bt-Qtz Schist	2.763	0.74
12ADP188	469379	7211196	Guiness Drainage	Bt-Qtz Schist	2.629	2.78
12ADP189	469400	7211243	Guiness Drainage	Bt-Qtz Schist	2.663	2.86
12ADP190	469385	7211279	Guiness Drainage	Marble	2.696	1.12
12ADP191	475570	7212437	South Cobblestone	Sill-Grt-Bt-Qtz Schist	3.065	1.97
12ADP192	475612	7212549	South Cobblestone	Sill-Grt-Bt-Qtz Schist	3.08	1.55
12ADP193	475657	7212657	South Cobblestone	Sill-Grt-Bt-Qtz Schist	2.922	1.89
12ADP194	475559	7212238	South Cobblestone	Sill-Grt-Bt-Qtz Schist	2.838	1.37
12ADP195	475616	7212241	South Cobblestone	Bt-Qtz Schist	2.765	3.34
12ADP196	475589	7212237	South Cobblestone	Sill-Grt-Bt-Qtz Schist	2.955	3.28
12ADP197	475685	7212227	South Cobblestone	Bt-Qtz Schist	2.73	0.52
12ADP198	475719	7212229	South Cobblestone	Bt-Qtz Schist	2.606	2.41
12ADP199	475747	7212229	South Cobblestone	Sill-Grt-Bt-Qtz Schist	2.79	1.97
12ADP200	475781	7212295	South Cobblestone	Sill-Grt-Bt-Qtz Schist	2.774	2.07
12ADP201	475777	7212346	South Cobblestone	Bt-Qtz Schist	2.573	2.86
12ADP202	475687	7212325	South Cobblestone	Bt-Qtz Schist	2.618	3.53
12ADP203	475728	7212367	South Cobblestone	Bt-Qtz Schist	2.616	2.06
12ADP204	475771	7212424	South Cobblestone	Bt-Qtz Schist	2.61	2.7
12ADP205	475843	7212393	South Cobblestone	Sill-Grt-Bt-Qtz Schist	2.736	0.05
12ADP206	475861	7212350	South Cobblestone	Bt-Qtz Schist	2.853	3.27
12ADP207	475943	7213386	South Cobblestone	Bt-Qtz Schist	2.724	0.74
12ADP208	475938	7212390	South Cobblestone	Bt-Qtz Schist	2.581	2.25
12ADP209	475891	7212436	South Cobblestone	Sill-Grt-Bt-Qtz Schist	3.061	2.54
12ADP210	475861	7212507	South Cobblestone	Bt-Qtz Schist	2.753	1
12ADP211	469846	7211250	Guiness Drainage	Bt-Qtz Schist	2.598	5.24
12ADP212	469794	7211317	Guiness Drainage	Bt-Qtz Schist	2.7	2.8
12ADP213	469779	7211359	Guiness Drainage	Sill-Grt-Bt-Qtz Schist	2.617	4.19
12ADP214	472084	7210701	Child Drainage	Bt-Qtz Schist	2.711	0.05
12ADP215	472078	7210737	Child Drainage	Bt-Qtz Schist	2.601	3.78
12ADP216	472048	7210816	Child Drainage	Bt-Qtz Schist	2.636	2.58
12ADP217	472099	7210921	Child Drainage	Bt-Qtz Schist	2.565	4.89
12ADP218	472060	7211034	Child Drainage	Bt-Qtz Schist	2.703	3
12ADP219	472045	7211080	Child Drainage	Bt-Qtz Schist	2.623	3
12ADP220	472023	7211147	Child Drainage	Sill-Grt-Bt-Qtz Schist	2.826	0.56
12ADP221	471972	7211228	Child Drainage	Sill-Grt-Bt-Qtz Schist	3.08	2.95
12ADP222	471972	7211228	Child Drainage	Sill-Grt-Bt-Qtz Schist	2.654	17.4
12ADP223	470659	7211134	Christophosen Creek	Sill-Grt-Bt-Qtz Schist	2.834	1.43
12ADP224	470455	7211385	Christophosen Creek	Bt-Qtz Schist	2.54	5.67
12ADP225	470453	7211449	Christophosen Creek	Bt-Qtz Schist	2.658	1.97
12ADP226	470427	7211503	Christophosen Creek	Sill-Grt-Bt-Qtz Schist	2.557	0.88
12ADP227	470414	7211516	Christophosen Creek	Graphite Pod	2.381	53.2
12ADP228	475243	7213019	Graphite Creek	Sill-Grt-Bt-Qtz Schist	2.799	8.13
12ADP229	475080	7213098	Graphite Creek	Sill-Grt-Bt-Qtz Schist	3.048	5.23
12ADP230	474396	7212726	Graphite Creek	Sill-Grt-Bt-Qtz Schist	2.786	4.63
12ETP001	481645	7213471	Cobblestone East	Sill-Grt-Bt-Qtz Schist	2.333	1.82
12ETP002	481248	7213374	Cobblestone East	Qtz-Diorite	2.772	0.05
12ETP003	481168	7213247	Cobblestone East	Sill-Grt-Bt-Qtz Schist	2.802	0.83
12ETP004	481120	7213185	Cobblestone East	Bt-Qtz Schist	2.694	0.39
12ETP005	481827	7213036	Cobblestone East	Grt-Bt-Qtz Schist	2.722	0.05
12ETP006	475251	7211770	Cobblestone South	Marble	2.77	0.58
12ETP007	475247	7211545	Cobblestone South	Bt-Qtz Schist	2.601	0.3
12ETP008	475235	7211425	Cobblestone South	Bt-Qtz Schist	2.73	0.18
12ETP009	475065	7211144	Cobblestone South	Bt-Qtz Schist	2.713	0.2
12ETP010	474897	7211030	Cobblestone South	Bt-Qtz Schist	2.73	0.13
12ETP011	474509	7210756	Cobblestone South	Sill-Grt-Bt-Qtz Schist	2.767	2.53
12ETP012	474478	7210694	Cobblestone South	Sill-Grt-Bt-Qtz Schist	2.771	2.2
12ETP013	476011	7210381	Cobblestone South	Sill-Grt-Bt-Qtz Schist	2.815	0.5
12ETP014	476476	7210409	Cobblestone South	Qtz-Diorite	2.636	0.05

Sample ID	Easting (m) Z3 NAD83	Northing (m) Z3 NAD83	Area	Lithology	Specific gravity (g/cm³)	Graphitic carbon (%)
12ETP015	476477	7210409	Cobblestone South	Marble	2.816	0.48
12ETP016	476469	7210347	Cobblestone South	Gneiss	2.817	0.05
12ETP017	475740	7211301	Cobblestone South	Gneiss	2.785	0.05
12ETP018	475528	7211173	Cobblestone South	Gneiss	2.586	0.05
12ETP019	475550	7211066	Cobblestone South	Gneiss	2.758	0.05
12ETP020	475653	7210917	Cobblestone South	Sill-Grt-Bt-Qtz Schist	2.762	0.78
12ETP021	475699	7211025	Cobblestone South	Sill-Grt-Bt-Qtz Schist	2.671	0.46
12ETP022	475708	7211073	Cobblestone South	Sill-Grt-Bt-Qtz Schist	2.765	9.75
12ETP023	475618	7210971	Cobblestone South	Sill-Grt-Bt-Qtz Schist	2.965	2.46
12ETP024	475614	7210981	Cobblestone South	Graphite Pod	2.248	61.1
12ETP025	475576	7210948	Cobblestone South	Sill-Grt-Bt-Qtz Schist	2.931	2.4
12ETP026	475576	7210948	Cobblestone South	Graphite Pod	2.397	56.6
12ETP027	475485	7210904	Cobblestone South	Bt-Qtz Schist	2.718	0.79
12ETP028	475473	7210902	Cobblestone South	Gneiss	2.699	0.21
12ETP029	475452	7210767	Cobblestone South	Sill-Grt-Bt-Qtz Schist	2.813	4.58
12ETP030	476003	7213533	Cobblestone Step	Bt-Qtz Schist	2.696	0.25
12ETP031	475996	7213687	Cobblestone Step	Bt-Qtz Schist	2.617	0.34
12ETP032	476072	7213741	Cobblestone Step	Bt-Qtz Schist	2.61	0.06
12ETP033	476073	7213632	Cobblestone Step	Grt-Bt-Qtz Schist	2.77	0.15
12ETP034	476202	7213648	Cobblestone Step	Grt-Bt-Qtz Schist	2.716	0.2
12ETP035	476320	7213428	Cobblestone Step	Sill-Grt-Bt-Qtz Schist	2.856	2.92
12ETP036	476414	7213493	Cobblestone Step	Sill-Grt-Bt-Qtz Schist	2.804	2.04
12ETP037	476573	7213542	Cobblestone Step	Sill-Grt-Bt-Qtz Schist	2.793	3.14
12ETP038	476043	7213306	Cobblestone Step	Bt-Qtz Schist	2.66	0.42
12ETP039	476314	7213303	Cobblestone Step	Sill-Grt-Bt-Qtz Schist	2.861	2.77
12ETP040	476522	7213382	Cobblestone Step	Sill-Grt-Bt-Qtz Schist	2.738	0.89
12ETP041	476658	7213637	Cobblestone Step	Sill-Grt-Bt-Qtz Schist	2.619	2.21
12ETP042	476663	7213708	Cobblestone Step	Bt-Qtz Schist	2.617	0.55
12ETP043	476745	7213801	Cobblestone Step	Bt-Qtz Schist	2.755	2.92
12ETP044	476652	7213902	Cobblestone Step	Bt-Qtz Schist	2.61	0.38
12ETP045	476488	7213814	Cobblestone Step	Bt-Qtz Schist	2.794	0.6
12ETP046	471462	7210724	Hotsprings Creek	Bt-Qtz Schist	2.48	3.46
12ETP047	471468	7210835	Hotsprings Creek	Qtz-Diorite	2.653	0.05
12ETP048	471467	7210867	Hot Springs Creek	Bt-Qtz Schist	2.524	3.2
12ETP049	471443	7210957	Hot Springs Creek	Bt-Qtz Schist	2.574	3.03
12ETP050	471436	7210986	Hot Springs Creek	Bt-Qtz Schist	2.41	2.76
12ETP051	471422	7211031	Hot Springs Creek	Marble	2.729	0.56
12ETP052	471422	7211031	Hot Springs Creek	Bt-Qtz Schist	2.62	5.43
12ETP053	471422	7211031	Hot Springs Creek	Bt-Qtz Schist	2.458	3.57
12ETP054	471373	7211008	Hot Springs Creek	Bt-Qtz Schist	2.553	4.13
12ETP055	471365	7210979	Hot Springs Creek	Bt-Qtz Schist	2.954	3.05
12ETP056	471332	7210984	Hot Springs Creek	Bt-Qtz Schist	2.75	0.1
12ETP057	471200	7210993	Hot Springs Creek	Bt-Qtz Schist	2.65	2.08
12ETP058	471185	7211028	Hot Springs Creek	Bt-Qtz Schist	2.583	3.12
12ETP059	471164	7211066	Hot Springs Creek	Bt-Qtz Schist	2.625	2.62
12ETP060	471153	7211159	Hot Springs Creek	Bt-Qtz Schist	2.551	5.08
12ETP061	471125	7211186	Hot Springs Creek	Sill-Grt-Bt-Qtz Schist	2.887	1.53
12ETP062	471126	7211240	Hot Springs Creek	Sill-Grt-Bt-Qtz Schist	2.965	1.8
12ETP063	471143	7211287	Hot Springs Creek	Bt-Qtz Schist	2.679	0.17
12ETP064	471154	7211371	Hot Springs Creek	Bt-Qtz Schist	2.633	3.28
12ETP065	471157	7211482	Hot Springs Creek	Sill-Grt-Bt-Qtz Schist	2.835	1.18
12ETP066	471145	7211526	Hot Springs Creek	Graphite Pod	2.43	49.6
12ETP067	471132	7211562	Hot Springs Creek	Sill-Grt-Bt-Qtz Schist	2.769	1.52
12ETP068	471129	7211583	Hot Springs Creek	Graphite Pod	2.452	35.3
12ETP069	471129	7211583	Hot Springs Creek	Sill-Grt-Bt-Qtz Schist	2.744	2.5
12ETP070	471130	7211608	Hot Springs Creek	Qtz-Diorite	2.629	0.07
12ETP071	471105	7211646	Hot Springs Creek	Bt-Qtz Schist	2.628	0.68
12ETP072	471091	7211724	Hot Springs Creek	Bt-Qtz Schist	2.866	2.17
12ETP073	471072	7211766	Hot Springs Creek	Bt-Qtz Schist	2.581	1.61
12ETP074	475652	7212310	Cobblestone South	Sill-Grt-Bt-Qtz Schist	2.732	0.44
12ETP075	475679	7212327	Cobblestone South	Bt-Qtz Schist	2.609	2.51

Sample ID	Easting (m) Z3 NAD83	Northing (m) Z3 NAD83	Area	Lithology	Specific gravity (g/cm³)	Graphitic carbon (%)
12JHP001	476255	7212497	Cobblestone Step	Bt-Qtz Schist	2.747	0.58
12JHP002	476372	7212975	Cobblestone Step	Grt-Bt-Qtz Schist	2.667	0.2
12JHP003	476714	7213158	Cobblestone Step	Grt-Bt-Qtz Schist	5.598	0.05
12JPP001	476890	7211530	GraphiteCreek	Bt-Qtz Schist	2.617	10
12JPP002	476905	7211512	GraphiteCreek	Bt-Qtz Schist	2.502	3.7
12JPP003	476923	7211513	GraphiteCreek	Bt-Qtz Schist	2.488	28
12JPP004	477292	7213413	GraphiteCreek	Bt-Qtz Schist	2.575	0.34
12JPP005	477278	7213421	GraphiteCreek	Bt-Qtz Schist	2.694	0.5
12JPP006	468962	7210682	GraphiteCreek	Grt-Bt-Qtz Schist	2.639	3.13
12JPP007	468960	7210737	GraphiteCreek	Grt-Bt-Qtz Schist	2.696	2
12JPP008	468929	7210755	GraphiteCreek	Grt-Bt-Qtz Schist	2.733	1.38
12JPP009	468970	7210862	GraphiteCreek	Grt-Bt-Qtz Schist	2.764	0.56
12JPP010	468988	7210878	GraphiteCreek	Bt-Qtz Schist	2.474	33.5
12KPP001	469142	7210946	Hot Spring Creek	Grt-Bt-Qtz Schist	2.738	0.25
12KPP002	469344	7210870	Hot Spring Creek	Sill-Grt-Bt-Qtz Schist	2.48	13.4
12KPP003	469543	7210873	Hot Spring Creek	Sill-Grt-Bt-Qtz Schist	2.682	0.58
12KPP004	469611	7210874	Hot Spring Creek	Sill-Grt-Bt-Qtz Schist	2.721	0.73
12KPP005	469645	7210910	Hot Spring Creek	Bt-Qtz Schist	2.491	5.3
12KPP006	469749	7210874	Hot Spring Creek	Sill-Grt-Bt-Qtz Schist	2.782	0.05
12KPP007	470045	7210986	Hot Spring Creek	Sill-Grt-Bt-Qtz Schist	2.345	0.05
12KPP008	469959	7210985	Hot Spring Creek	Sill-Grt-Bt-Qtz Schist	2.812	0.05
12KPP009	469872	7211013	Hot Spring Creek	Massive Graphite	2.396	0.05
12KPP010	470048	7210982	Hot Spring Creek	Grt-Bt-Qtz Schist	2.665	15.2
12KPP011	474044	7212399	Ruby Creek	Bt-Qtz Schist	2.676	1.02
12KPP012	473915	7212410	Ruby Creek	Bt-Qtz Schist	2.591	2.88
12KPP013	473951	7212242	Ruby Creek	Bt-Qtz Schist	2.453	1.7
12KPP014	473913	7212502	Ruby Creek	Bt-Qtz Schist	2.803	0.05
12KPP015	473929	7212533	Ruby Creek	Grt-Bt-Qtz Schist	2.863	1.19
12KPP016	473897	7212524	Ruby Creek	Sill-Grt-Bt-Qtz Schist	2.579	1.7
12KPP017	473890	7212551	Ruby Creek	Sill-Grt-Bt-Qtz Schist	2.271	15.4
12KPP018	473801	7212667	Ruby Creek	Sill-Grt-Bt-Qtz Schist	2.715	0.87
12KPP019	474043	7211496	Glacier Canyon Creek	Grt-Bt-Qtz Schist	2.654	0.49
12KPP020	473777	7211445	Glacier Canyon Creek	Grt-Bt-Qtz Schist	2.727	0.8
12KPP021	473577	7211531	Glacier Canyon Creek	Grt-Bt-Qtz Schist	2.697	0.21
12KPP022	473486	7211581	Glacier Canyon Creek	Bt-Qtz Schist	2.695	0.35
12KPP023	473401	7211796	Glacier Canyon Creek	Grt-Bt-Qtz Schist	2.752	0.19
12KPP024	473392	7211906	Glacier Canyon Creek	Bt-Qtz Schist	2.785	0.41
12KPP025	473357	7212005	Glacier Canyon Creek	Bt-Qtz Schist	2.576	0.52
12KPP026	473336	7212108	Glacier Canyon Creek	Bt-Qtz Schist	2.641	2.05
12KPP027	473305	7212173	Glacier Canyon Creek	Bt-Qtz Schist	2.754	0.05
12KPP028	473301	7212218	Glacier Canyon Creek	Sill-Grt-Bt-Qtz Schist	2.757	0.25
12KPP029	473221	7212203	Glacier Canyon Creek	Bt-Qtz Schist	2.51	0.33
12KPP030	473238	7212291	Glacier Canyon Creek	Bt-Qtz Schist	2.647	0.05
12KPP031	472726	7211969	Glacier Canyon Creek	Sill-Grt-Bt-Qtz Schist	2.692	0.46
12KPP032	473745	7212310	Glacier Canyon Creek	Bt-Qtz Schist	2.71	2.76
12KPP033	473780	7212426	Glacier Canyon Creek	Bt-Qtz Schist	2.595	1.64
12KPP034	473607	7212414	Glacier Canyon Creek	Sill-Grt-Bt-Qtz Schist	2.731	0.05
12KPP035	472734	7211578	Trail Creek	Bt-Qtz Schist	2.662	0.23
12KPP036	472705	7211603	Trail Creek	Sill-Grt-Bt-Qtz Schist	2.6	0.38
12KPP037	472688	7211806	Trail Creek	Bt-Qtz Schist	2.573	3.21
12KPP038	472685	7211832	Trail Creek	Sill-Grt-Bt-Qtz Schist	2.752	1.28
12KPP039	472645	7211908	Trail Creek	Bt-Qtz Schist	2.768	0.25
12KPP040	472445	7211964	Trail Creek	Bt-Qtz Schist	2.68	0.06
12KPP041	469262	7210723	Guinness Creek West	Sill-Grt-Bt-Qtz Schist	2.654	0.05
12KPP042	469262	7210731	Guinness Creek West	Sill-Grt-Bt-Qtz Schist	2.761	2.27
12KPP043	469273	7210762	Guinness Creek West	Sill-Grt-Bt-Qtz Schist	2.757	4.21
12KPP044	469309	7210790	Guinness Creek West	Sill-Grt-Bt-Qtz Schist	2.476	33.8
12KPP045	469286	7210836	Guinness Creek West	Bt-Qtz Schist	2.715	0.05
12KPP046	469314	7210907	Guinness Creek West	Bt-Qtz Schist	2.668	0.21
12KPP047	469364	7210947	Guinness Creek West	Sill-Grt-Bt-Qtz Schist	2.776	1.81
12KPP048	469405	7210997	Guinness Creek West	Sill-Grt-Bt-Qtz Schist	2.781	0.34

Sample ID	Easting (m) Z3 NAD83	Northing (m) Z3 NAD83	Area	Lithology	Specific gravity (g/cm³)	Graphitic carbon (%)
12KPP049	469308	7211008	Guinness Creek West	Bt-Qtz Schist	2.821	0.6
12KPP050	469122	7210461	Guinness Creek West	Bt-Qtz Schist	2.705	0.34
12KPP051	469185	7210856	Guinness Creek West	Qtz-Diorite	2.594	0.05
12KPP052	469266	7211045	Guinness Creek West	Bt-Qtz Schist	2.714	0.27
12KPP053	469309	7211067	Guinness Creek West	Bt-Qtz Schist	2.735	0.05
12KPP054	469343	7211126	Guinness Creek West	Bt-Qtz Schist	2.759	0.05
12KPP055	469961	7211393	Guinness Creek West	Qtz-Diorite	2.779	0.05
12KPP056	469953	7211377	Guinness Creek West	Bt-Qtz Schist	2.548	29.1
12KPP057	469780	7211391	Guinness Creek West	Massive Graphite	2.334	56.8
12KPP058	469681	7211339	Guinness Creek West	Bt-Qtz Schist	2.599	3.03
12KPP059	469824	7211158	Guinness Creek West	Bt-Qtz Schist	2.716	2.9
12KPP060	469804	7211180	Guinness Creek West	Bt-Qtz Schist	2.599	3.05
12KPP061	469774	7211207	Guinness Creek West	Bt-Qtz Schist	2.579	3.53
12KPP062	469820	7211210	Guinness Creek West	Bt-Qtz Schist	2.97	4.66
12KPP063	469852	7211226	Guinness Creek West	Bt-Qtz Schist	2.59	5.31
12TCP001	471646	7211437	Child Drainage	Qtz-Diorite	2.566	0.86
12TCP002	471714	7211510	Child Drainage	Sill-Grt-Bt-Qtz Schist	2.826	1.01
12TCP003	471708	7211610	Child Drainage	Sill-Grt-Bt-Qtz Schist	2.676	0.05
12TCP004	471647	7211857	Child Drainage	Bt-Qtz Schist	2.618	10.7
12TCP005	471958	7211939	Toby Drainage	Sill-Grt-Bt-Qtz Schist	2.41	16.8
12TCP006	471910	7211411	Child Drainage	Sill-Grt-Bt-Qtz Schist	2.808	1.82
12TCP007	471897	7211403	Child Drainage	Qtz-Diorite	2.625	0.24
12TCP008	471887	7211464	Child Drainage	Sill-Grt-Bt-Qtz Schist	2.685	0.29
12TCP009	471767	7211633	Child Drainage	Sill-Grt-Bt-Qtz Schist	2.776	2.06
12TCP010	476306	7211597	Cobblestone South	Sill-Grt-Bt-Qtz Schist	2.715	0.05
12TCP011	477033	7212123	Cobblestone South	Sill-Grt-Bt-Qtz Schist	2.774	0.05
12TCP012	475412	7211358	Cobblestone South	Bt-Qtz Schist	2.869	0.87
12TCP013	475550	7211400	Cobblestone South	Marble	2.845	1.75
12TCP014	474740	7212805	Graphite Creek	Sill-Grt-Bt-Qtz Schist	2.625	4.19
12TCP015	476250	7212449	Cobblestone Step	Bt-Qtz Schist	2.734	1.49
12TCP016	476375	7212965	Cobblestone Step	Sill-Grt-Bt-Qtz Schist	2.691	10.3
12TCP018	479043	7214660	Cobblestone East	Sill-Grt-Bt-Qtz Schist	2.702	13.8
12TCP019	480521	7212125	Cobblestone East	Basalt	2.573	0.05
12TCP020	480610	7212437	Cobblestone East	Bt-Qtz Schist	2.695	0.05
12TCP021	478692	7213728	Cobblestone East	Sill-Grt-Bt-Qtz Schist	2.702	3.72
12TCP022	478751	7213649	Cobblestone East	Sill-Grt-Bt-Qtz Schist	2.57	1.75
12TCP023	478670	7213101	Cobblestone East	Bt-Qtz Schist	2.642	0.05
12TCP024	478479	7212872	Cobblestone East	Bt-Qtz Schist	2.713	0.05
12TCP025	473975	7210014	Cobblestone East	Qtz-Diorite	2.736	0.05
12TCP026	474003	7210186	Cobblestone East	Quartzite	2.871	0.43
12TCP027	474068	7210431	Cobblestone East	Marble	2.977	0.1
12TCP028	474287	7210070	Cobblestone South	Sill-Grt-Bt-Qtz Schist	2.883	2.21
12TCP029	474319	7210082	Cobblestone South	Sill-Grt-Bt-Qtz Schist	2.674	7.67
12TCP030	474586	7210047	Cobblestone South	Gneiss	2.585	0.05
12TCP031	474899	7210612	Cobblestone South	Sill-Grt-Bt-Qtz Schist		1.32
12TCP032	470360	7211036	Christophosen Creek	Gneiss	2.742	3.72
12TCP033	470350	7210979	Christophosen Creek	Bt-Qtz Schist	2.746	0.49
12TCP034	470361	7211001	Christophosen Creek	Sill-Grt-Bt-Qtz Schist	2.976	5.2
12TCP035	470359	7210903	Christophosen Creek	Sill-Grt-Bt-Qtz Schist	3.114	4.24
12TCP036	470396	7211086	Christophosen Creek	Sill-Grt-Bt-Qtz Schist	2.663	0.91
12TCP037	470384	7211124	Christophosen Creek	Bt-Qtz Schist	2.73	2.94
12TCP038	470378	7211175	Christophosen Creek	Sill-Grt-Bt-Qtz Schist	3.415	4.59
12TCP039	470378	7211195	Christophosen Creek	Bt-Qtz Schist	2.765	1.86
12TCP040	480368	7211234	Christophosen Creek	Sill-Grt-Bt-Qtz Schist	2.805	1.13
12TCP041	470379	7211309	Christophosen Creek	Sill-Grt-Bt-Qtz Schist	2.719	26.1
12TCP042	470371	7211359	Christophosen Creek	Bt-Qtz Schist	2.603	0.97
12TCP043	470337	7211535	Christophosen Creek	Sill-Grt-Bt-Qtz Schist	2.682	0.39
12TPP001	474666	7212972	Graphite Creek	Bt-Qtz Schist	2.779	3.71
12TPP002	474677	7212938	Graphite Creek	Bt-Qtz Schist	2.666	0.42
12TPP003	474707	7212925	Graphite Creek	Bt-Qtz Schist	2.74	0.12
12TPP004	474710	7212917	Graphite Creek	Bt-Qtz Schist	2.494	35.9

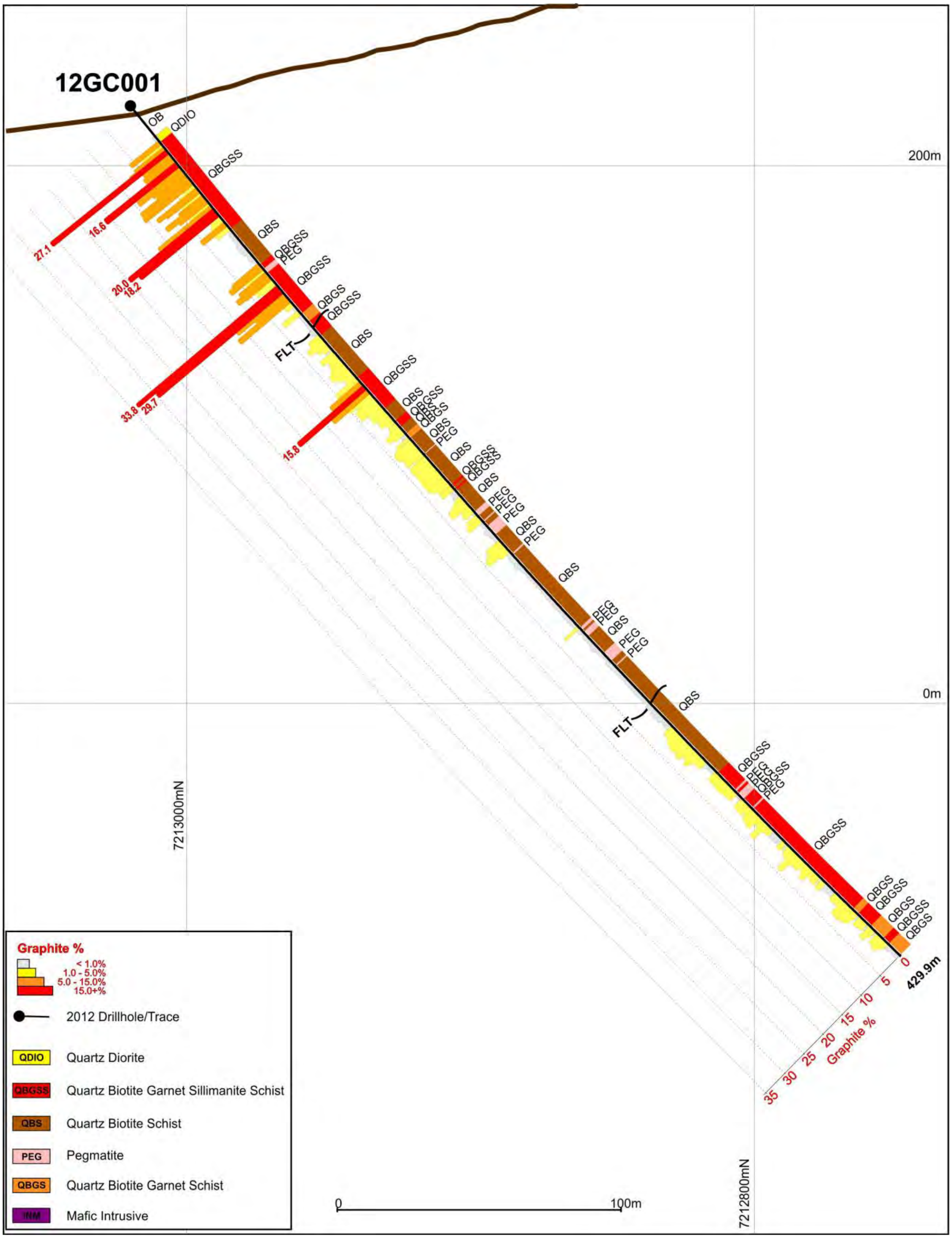
Sample ID	Easting (m) Z3 NAD83	Northing (m) Z3 NAD83	Area	Lithology	Specific gravity (g/cm³)	Graphitic carbon (%)
12TPP005	474702	7212920	Graphite Creek	Bt-Qtz Schist	2.616	2.03
12TPP006	474743	7212886	Graphite Creek	Bt-Qtz Schist	2.664	0.92
12TPP007	474747	7212819	Graphite Creek	Bt-Qtz Schist	2.5	9.19
12TPP008	474748	7212742	Graphite Creek	Bt-Qtz Schist	2.772	0.4
12TPP009	474859	7212765	Graphite Creek	Bt-Qtz Schist	2.505	0.05
12TPP010	474867	7212785	Graphite Creek	Bt-Qtz Schist	2.703	2.21
12TPP011	475010	7212887	Graphite Creek	Grt-Bt-Qtz Schist	2.862	0.05
12TPP012	474892	7212884	Graphite Creek	Bt-Qtz Schist	2.532	0.38
12TPP013	474847	7212867	Graphite Creek	Bt-Qtz Schist	2.468	30.3
12TPP014	474778	7212899	Graphite Creek	Massive Graphite	2.363	63.5
12TPP015	474722	7212959	Graphite Creek	Bt-Qtz Schist	2.564	3.46
12TPP016	475100	7213101	Graphite Creek	Bt-Qtz Schist	2.695	3.05
12TPP017	475468	7213012	Graphite Creek	Bt-Qtz Schist	2.676	0.09
12TPP018	475321	7212986	Graphite Creek	Bt-Qtz Schist	2.787	0.66
12TPP019	475256	7213016	Graphite Creek	Bt-Qtz Schist	2.716	3.29
12TPP020	475212	7212981	Graphite Creek	Bt-Qtz Schist	2.599	0.14
12TPP021	475021	7212918	Graphite Creek	Bt-Qtz Schist	2.739	0.05
12TPP022	475281	7212850	Graphite Creek	Bt-Qtz Schist	2.62	1.5
12TPP023	475480	7212808	Graphite Creek	Bt-Qtz Schist	2.731	0.05
12TPP024	475486	7212733	Graphite Creek	Bt-Qtz Schist	2.837	3.62
12TPP025	474925	7212510	Graphite Creek	Bt-Qtz Schist	2.607	1.77
12TPP026	474788	7212652	Graphite Creek	Bt-Qtz Schist	2.637	1.41
12TPP027	474786	7212654	Graphite Creek	Qtz-Diorite	2.608	0.05
12TPP028	474523	7212361	Graphite Creek	Bt-Qtz Schist	2.707	0.07
12TPP029	474400	7212341	Graphite Creek	Bt-Qtz Schist	2.797	0.41
12TPP030	474535	7212356	Graphite Creek	Marble	2.77	1.56
12TPP031	474599	7212388	Graphite Creek	Bt-Qtz Schist	2.687	0.64
12TPP032	474560	7212443	Graphite Creek	Bt-Qtz Schist	2.518	1.34
12TPP033	474640	7212484	Graphite Creek	Bt-Qtz Schist	2.62	1.5
12TPP034	474637	7212554	Graphite Creek	Bt-Qtz Schist	2.591	0.52
12TPP035	474578	7212570	Graphite Creek	Bt-Qtz Schist	2.624	2.41
12TPP036	474596	7212649	Graphite Creek	Bt-Qtz Schist	2.732	1.64
12TPP037	474606	7212711	Graphite Creek	Bt-Qtz Schist	2.707	2.6
12TPP038	474614	7212739	Graphite Creek	Bt-Qtz Schist	2.684	0.18
12TPP039	474606	7212779	Graphite Creek	Bt-Qtz Schist	2.876	0.06
12TPP040	474641	7212814	Graphite Creek	Bt-Qtz Schist	2.709	0.05
12TPP041	473091	7211907	Trail Creek	Bt-Qtz Schist	2.59	2.68
12TPP042	472948	7211918	Trail Creek	Basalt	2.747	0.05
12TPP043	472940	7211918	Trail Creek	Qtz-Diorite	2.611	0.05
12TPP044	472928	7211930	Trail Creek	Grt-Bt-Qtz Schist	2.783	1.56
12TPP045	472961	7211877	Trail Creek	Bt-Qtz Schist	2.586	3.56
12TPP046	472862	7211954	Trail Creek	Grt-Bt-Qtz Schist	2.685	0.84
12TPP047	472834	7211986	Trail Creek	Grt-Bt-Qtz Schist	2.712	1.34
12TPP048	472790	7211921	Trail Creek	Sill-Grt-Bt-Qtz Schist	2.706	2.21
12TPP049	472777	7211945	Trail Creek	Sill-Grt-Bt-Qtz Schist	2.543	20.9
12TPP050	472661	7212095	Trail Creek	Bt-Qtz Schist	2.535	1.9
12TPP051	472853	7211711	Trail Creek	Bt-Qtz Schist	2.73	0.4
12TPP052	472791	7211822	Trail Creek	Sill-Grt-Bt-Qtz Schist	2.924	1.72
12TPP053	472748	7211896	Trail Creek	Sill-Grt-Bt-Qtz Schist	2.867	0.91
12TPP054	472705	7211952	Trail Creek	Bt-Qtz Schist	2.816	0.6
12TPP055	472687	7211998	Trail Creek	Sill-Grt-Bt-Qtz Schist	2.664	24.2
12TPP056	472608	7212127	Trail Creek	Sill-Grt-Bt-Qtz Schist	2.449	17.3
12TPP057	472769	7212176	Trail Creek	Grt-Bt-Qtz Schist	2.527	4.43
12TPP058	473167	7212089	Glacier Canyon Creek	Sill-Grt-Bt-Qtz Schist	2.743	1.06
12TPP059	473173	7212149	Glacier Canyon Creek	Sill-Grt-Bt-Qtz Schist	2.719	1.95
12TPP060	473171	7212173	Glacier Canyon Creek	Sill-Grt-Bt-Qtz Schist	2.706	1.24
12TPP061	473244	7212380	Glacier Canyon Creek	Sill-Grt-Bt-Qtz Schist	2.748	1.79
12TPP062	473278	7212400	Glacier Canyon Creek	Sill-Grt-Bt-Qtz Schist	2.649	9.11
12TPP063	473312	7212434	Glacier Canyon Creek	Qtz-Diorite	2.538	0.05
12TPP064	473300	7212420	Glacier Canyon Creek	Bt-Qtz Schist	2.368	33.5
12TPP065	473794	7212406	Ruby Creek	Bt-Qtz Schist	2.501	3.27

Sample ID	Easting (m) Z3 NAD83	Northing (m) Z3 NAD83	Area	Lithology	Specific gravity (g/cm³)	Graphitic carbon (%)
12TPP066	473719	7212395	Ruby Creek	Bt-Qtz Schist	2.589	3.72
12TPP067	473526	7212398	Glacier Canyon Creek	Sill-Grt-Bt-Qtz Schist	2.636	22.2
12TPP068	472711	7211592	Trail Creek	Bt-Qtz Schist	2.559	0.63
12TPP069	472689	7211645	Trail Creek	Bt-Qtz Schist	2.67	0.8
12TPP070	472683	7211831	Trail Creek	Grt-Bt-Qtz Schist	2.621	1.16
12TPP071	472672	7211884	Trail Creek	Sill-Grt-Bt-Qtz Schist	2.712	0.11
12TPP072	472481	7212059	Trail Creek	Bt-Qtz Schist	2.617	1.67
12TPP073	472065	7211819	Toby Drainage	Qtz-Diorite	2.616	0.06
12TPP074	472001	7211906	Toby Drainage	Bt-Qtz Schist	2.665	0.05
12TPP075	471961	7211942	Toby Drainage	Sill-Grt-Bt-Qtz Schist	2.311	17.8
12TPP076	477153	7212383	Cobblestone South	Bt-Qtz Schist	2.709	4.56
12TPP077	474696	7212922	Graphite Creek	Qtz-Diorite	2.552	0.05
12TPP078	474743	7212784	Graphite Creek	Bt-Qtz Schist	2.646	2.25
12TPP079	476301	7211297	Cobblestone Step	Sill-Grt-Bt-Qtz Schist	2.74	0.21
12TPP080	476179	7212367	Cobblestone Step	Sill-Grt-Bt-Qtz Schist	2.704	0.85
12TPP081	476251	7212449	Cobblestone Step	Bt-Qtz Schist	2.725	1.47
12TPP082	476342	7212927	Cobblestone Step	Sill-Grt-Bt-Qtz Schist	3.23	2.69
12TPP083	476360	7212963	Cobblestone Step	Sill-Grt-Bt-Qtz Schist	2.624	1.08
12TPP084	476714	7212798	Cobblestone Step	Sill-Grt-Bt-Qtz Schist	2.635	2.54
12TPP085	477077	7212854	Cobblestone Step	Sill-Grt-Bt-Qtz Schist	2.814	0.21
12TPP086	477106	7212955	Cobblestone Step	Bt-Qtz Schist	2.66	0.05
12TPP087	476948	7212958	Cobblestone Step	Sill-Grt-Bt-Qtz Schist	2.862	1.56
12TPP088	477068	7213042	Cobblestone Step	Sill-Grt-Bt-Qtz Schist	2.812	1.73
12TPP089	478840	7214496	Cobblestone East	Sill-Grt-Bt-Qtz Schist	2.85	0.05
12TPP090	478780	7214452	Cobblestone East	Grt-Bt-Qtz Schist	2.659	0.71
12TPP091	478782	7214162	Cobblestone East	Bt-Qtz Schist	2.658	0.24
12TPP092	478665	7214034	Cobblestone East	Bt-Qtz Schist	2.628	1.85
12TPP093	478779	7213733	Cobblestone East	Bt-Qtz Schist	2.582	0.37
12TPP094	478776	7213704	Cobblestone East	Bt-Qtz Schist	2.751	1.08
12TPP095	478691	7213728	Cobblestone East	Sill-Grt-Bt-Qtz Schist	2.746	3.87
12TPP096	478707	7213671	Cobblestone East	Sill-Grt-Bt-Qtz Schist	2.895	1.16
12TPP097	478751	7213636	Cobblestone East	Bt-Qtz Schist	2.58	3.19
12TPP098	478750	7213636	Cobblestone East	Sill-Grt-Bt-Qtz Schist	2.873	2.12
12TPP099	481642	7213447	Cobblestone East	Bt-Qtz Schist	2.701	0.38
12TPP100	481215	7213291	Cobblestone East	Sill-Grt-Bt-Qtz Schist	2.654	6.04
12TPP101	481106	7213177	Cobblestone East	Sill-Grt-Bt-Qtz Schist	2.701	8.94
12TPP102	481150	7213148	Cobblestone East	Sill-Grt-Bt-Qtz Schist	2.557	22.4
12TPP103	473976	7209922	Cobblestone East	Bt-Qtz Schist	2.754	0.78
12TPP104	473973	7210017	Cobblestone East	Qtz-Diorite	2.701	0.05
12TPP105	474012	7210183	Cobblestone East	Sill-Grt-Bt-Qtz Schist	2.812	1.43
12TPP106	474003	7210186	Cobblestone East	Quartzite	2.628	0.18
12TPP107	474069	7210431	Cobblestone East	Quartzite	2.826	0.34
12TPP108	474093	7210432	Cobblestone East	Sill-Grt-Bt-Qtz Schist	2.983	1.18
12TPP109	474168	7210507	Cobblestone East	Bt-Qtz Schist	2.717	0.81
12TPP110	474394	7210683	Cobblestone South	Bt-Qtz Schist	2.643	1.48
12TPP111	474214	7210590	Cobblestone South	Sill-Grt-Bt-Qtz Schist	2.771	0.41
12TPP112	474407	7210747	Cobblestone South	Sill-Grt-Bt-Qtz Schist	2.665	0.47
12TPP113	474391	7210795	Cobblestone South	Sill-Grt-Bt-Qtz Schist	2.679	0.36
12TPP114	474367	7210897	Cobblestone South	Sill-Grt-Bt-Qtz Schist	2.617	1.07
12TPP115	474385	7210977	Graphite Creek	Sill-Grt-Bt-Qtz Schist	2.856	1.34
12TPP116	474385	7210977	Graphite Creek	Bt-Qtz Schist	2.58	0.56
12TPP117	474378	7211077	Graphite Creek	Quartzite	2.72	0.13
12TPP118	474378	7211092	Graphite Creek	Sill-Grt-Bt-Qtz Schist	2.845	3.44
12TPP119	474101	7210115	Cobblestone South	Bt-Qtz Schist	2.708	0.05
12TPP120	474165	7210073	Cobblestone South	Bt-Qtz Schist	2.792	0.46
12TPP121	474250	7210073	Cobblestone South	Bt-Qtz Schist	2.633	0.41
12TPP122	474283	7210073	Cobblestone South	Sill-Grt-Bt-Qtz Schist	3.058	1.86
12TPP123	474316	7210084	Cobblestone South	Sill-Grt-Bt-Qtz Schist	2.686	7.89
12TPP124	474397	7210066	Cobblestone South	Qtz-Diorite	2.682	0.05
12TPP125	474545	7210039	Cobblestone South	Qtz-Diorite	2.634	0.05
12TPP126	474586	7210047	Cobblestone South	Gneiss	2.75	0.05

Sample ID	Easting (m) Z3 NAD83	Northing (m) Z3 NAD83	Area	Lithology	Specific gravity (g/cm³)	Graphitic carbon (%)
12TPP127	474918	7210613	Cobblestone South	Sill-Grt-Bt-Qtz Schist	2.725	0.34
12TPP128	474900	7210612	Cobblestone South	Sill-Grt-Bt-Qtz Schist	2.74	5.9
12TPP129	474956	7210613	Cobblestone South	Sill-Grt-Bt-Qtz Schist	2.75	5.95
12TPP130	475149	7210459	Cobblestone South	Gneiss	2.631	0.12
12TPP131	475166	7210412	Cobblestone South	Sill-Grt-Bt-Qtz Schist	2.857	7.36
12TPP132	475228	7210379	Cobblestone South	Gneiss	2.786	0.24
12TPP133	477002	7213411	Cobblestone Step	Sill-Grt-Bt-Qtz Schist	2.712	0.53
12TPP134	472359	7211261	Trail Creek	Bt-Qtz Schist	2.745	1.38
12TPP135	472344	7211288	Trail Creek	Sill-Grt-Bt-Qtz Schist	3.011	1.15
12TPP136	472362	7211379	Trail Creek	Sill-Grt-Bt-Qtz Schist	2.665	0.15
12TPP137	472367	7211542	Trail Creek	Sill-Grt-Bt-Qtz Schist	2.681	2.96
12TPP138	472367	7211540	Trail Creek	Sill-Grt-Bt-Qtz Schist	2.872	2.55
12TPP139	472353	7211597	Trail Creek	Sill-Grt-Bt-Qtz Schist	2.841	1.65
12TPP140	472177	7211553	Toby Drainage	Sill-Grt-Bt-Qtz Schist	3.132	0.05
12TPP141	472154	7211622	Toby Drainage	Bt-Qtz Schist	2.677	2.09
12TPP142	472172	7211628	Toby Drainage	Sill-Grt-Bt-Qtz Schist	2.775	1.68
12TPP143	471417	7211051	Hot Springs Creek	Sill-Grt-Bt-Qtz Schist	2.706	1.13
12TPP144	471417	7211071	Hot Springs Creek	Bt-Qtz Schist	2.568	14.4
12TPP145	471390	7211077	Hot Springs Creek	Bt-Qtz Schist	2.642	1.76
12TPP146	471389	7211084	Hot Springs Creek	Sill-Grt-Bt-Qtz Schist	2.761	2.04
12TPP147	471349	7211153	Hot Springs Creek	Sill-Grt-Bt-Qtz Schist	2.726	3.36
12TPP148	471396	7211202	Hot Springs Creek	Bt-Qtz Schist	2.732	1
12TPP149	471384	7211358	Hot Springs Creek	Bt-Qtz Schist	2.581	0.5
12TPP150	471378	7211404	Hot Springs Creek	Bt-Qtz Schist	2.574	2.98
12TPP151	471369	7211418	Hot Springs Creek	Sill-Grt-Bt-Qtz Schist	3.367	1.45
12TPP152	471333	7211438	Hot Springs Creek	Sill-Grt-Bt-Qtz Schist	2.572	7.01
12TPP153	474644	7212880	Graphite Creek	Sill-Grt-Bt-Qtz Schist	2.47	51.2
12TPP154	474644	7212878	Graphite Creek	Sill-Grt-Bt-Qtz Schist	2.721	1.68
12TPP155	473949	7210183	Kigluaik Peaks	Sill-Grt-Bt-Qtz Schist	2.872	0.05
12TPP156	473535	7210241	Kigluaik Peaks	Sill-Grt-Bt-Qtz Schist	2.645	0.05
12TPP157	473461	7210270	Kigluaik Peaks	Marble	2.992	0.05
12TPP158	473461	7210268	Kigluaik Peaks	Bt-Qtz Schist	2.684	0.05
12TPP159	473400	7210283	Kigluaik Peaks	Sill-Grt-Bt-Qtz Schist	2.709	0.56
12TPP160	473091	7210112	Kigluaik Peaks	Marble	2.672	0.5
12TPP161	472872	7209978	Kigluaik Peaks	Bt-Qtz Schist	2.557	0.05
12TPP162	475421	7212003	South Cobblestone	Grt-Bt-Qtz Schist	2.741	0.57
12TPP163	475447	7212093	South Cobblestone	Sill-Grt-Bt-Qtz Schist	2.792	0.05
12TPP164	475523	7212143	South Cobblestone	Sill-Grt-Bt-Qtz Schist	2.776	0.05
12TPP165	475518	7212233	South Cobblestone	Sill-Grt-Bt-Qtz Schist	2.713	2.98
12TPP166	475547	7212293	South Cobblestone	Grt-Bt-Qtz Schist	2.81	0.3
12TPP167	475538	7212286	South Cobblestone	Sill-Grt-Bt-Qtz Schist	2.937	4.4
12TPP168	475525	7212355	South Cobblestone	Sill-Grt-Bt-Qtz Schist	2.797	0.05

CHANNEL 1					
Sample ID	Easting (m) Z3 NAD83	Northing (m) Z3 NAD83	Area	Sample length (m)	Graphitic carbon (%)
12TPC001	474702.581	7212678.340	Graphite Creek	1.00	0.440
12TPC002	474702.561	7212679.427	Graphite Creek	1.00	0.510
12TPC003	474702.493	7212680.360	Graphite Creek	1.00	0.470
12TPC004	474702.475	7212681.252	Graphite Creek	1.00	0.350
12TPC005	474702.629	7212682.173	Graphite Creek	1.00	0.410
12TPC006	474702.752	7212683.076	Graphite Creek	1.00	0.410
12TPC007	474702.713	7212684.058	Graphite Creek	1.00	0.540
12TPC008	474702.583	7212685.014	Graphite Creek	1.00	0.510
12TPC009	474702.525	7212685.945	Graphite Creek	1.00	0.520
12TPC010	474702.446	7212686.923	Graphite Creek	1.00	0.520
12TPC011	474702.369	7212687.949	Graphite Creek	1.00	0.560
12TPC012	474702.254	7212688.900	Graphite Creek	1.00	0.620
12TPC013	474702.133	7212689.865	Graphite Creek	1.00	0.480
12TPC014	474701.994	7212690.888	Graphite Creek	1.00	0.420
12TPC015	474701.796	7212691.751	Graphite Creek	0.66	0.270
12TPC016	474702.158	7212692.533	Graphite Creek	1.00	0.430
12TPC017	474701.778	7212693.347	Graphite Creek	1.00	0.510
12TPC018	474701.506	7212694.259	Graphite Creek	1.00	0.370
12TPC019	474701.514	7212695.236	Graphite Creek	1.00	0.570
12TPC020	474701.553	7212696.145	Graphite Creek	1.00	0.650
12TPC021	474701.584	7212697.052	Graphite Creek	1.00	0.390
12TPC022	474701.559	7212698.024	Graphite Creek	1.00	0.440
12TPC023	474701.390	7212698.927	Graphite Creek	1.00	0.520
12TPC024	474701.200	7212699.868	Graphite Creek	1.00	0.420
12TPC025	474701.067	7212700.784	Graphite Creek	1.00	0.550
CHANNEL 2					
Sample ID	Easting (m) Z3 NAD83	Northing (m) Z3 NAD83	Area	Sample length (m)	Graphitic carbon (%)
12ADC001	474671.549	7212929.856	Graphite Creek	0.80	0.005
12ADC002	474671.468	7212930.744	Graphite Creek	0.85	0.400
12ADC003	474670.772	7212931.533	Graphite Creek	1.00	0.570
12ADC004	474670.122	7212932.283	Graphite Creek	1.00	0.005
12ADC005	474670.077	7212933.627	Graphite Creek	1.00	0.270
12ADC006	474667.843	7212933.939	Graphite Creek	1.00	0.340
12ADC007	474667.388	7212934.667	Graphite Creek	1.00	0.420

Appendix 4. 2012 Exploration Program; Drillhole Cross Sections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QBS
PEG
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200m
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7212800mN
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16.6
20.0
18.2
33.8
29.7
15.8
429.9m
0
5
10
15
20
25
30
35
Graphite %
< 1.0%
1.0 - 5.0%
5.0 - 15.0%
15.0+%
2012 Drillhole/Trace
QDIO Quartz Diorite
QBGSS Quartz Biotite Garnet Sillimanite Schist
QBS Quartz Biotite Schist
PEG Pegmatite
QBGS Quartz Biotite Garnet Schist
INM Mafic Intrusive
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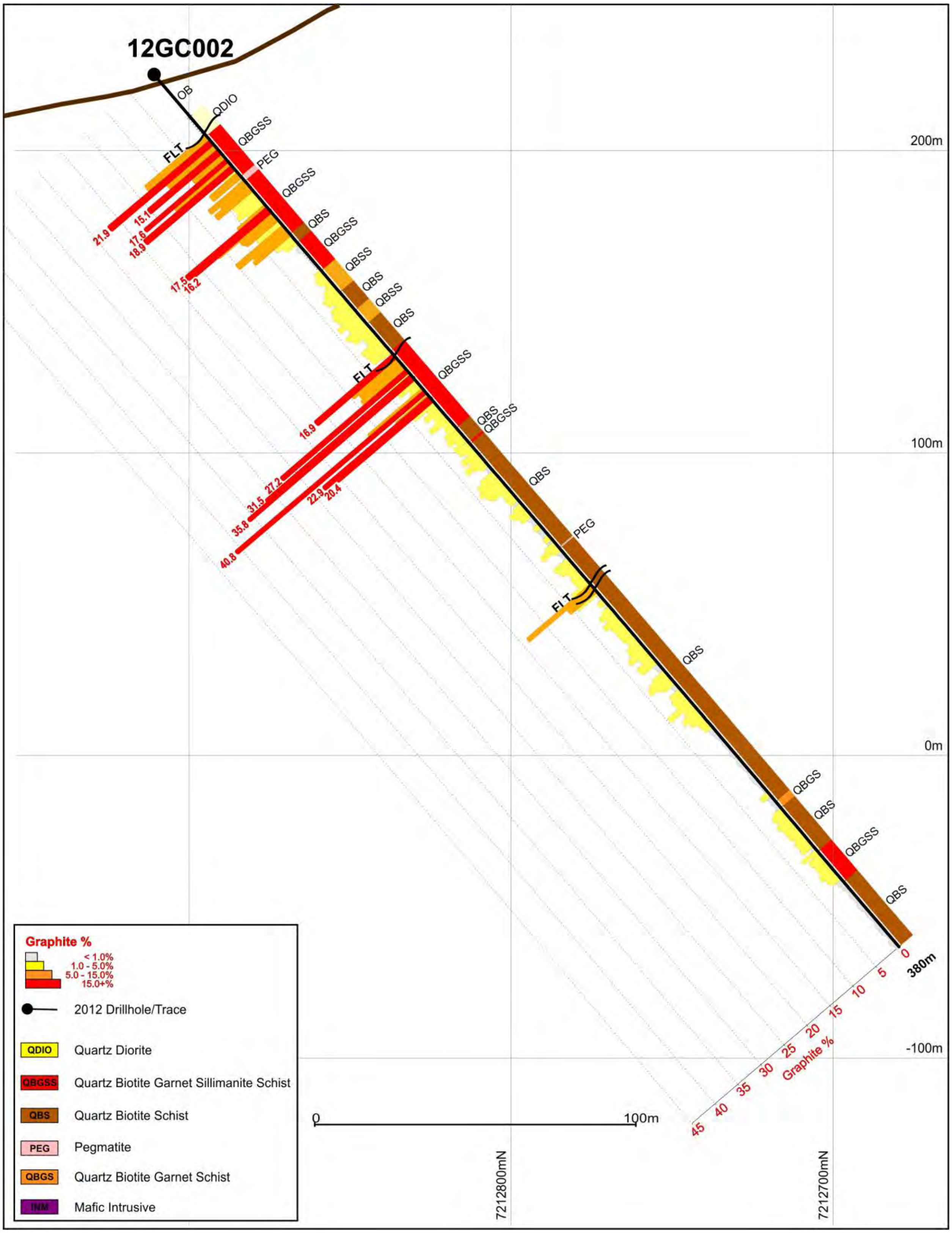
100m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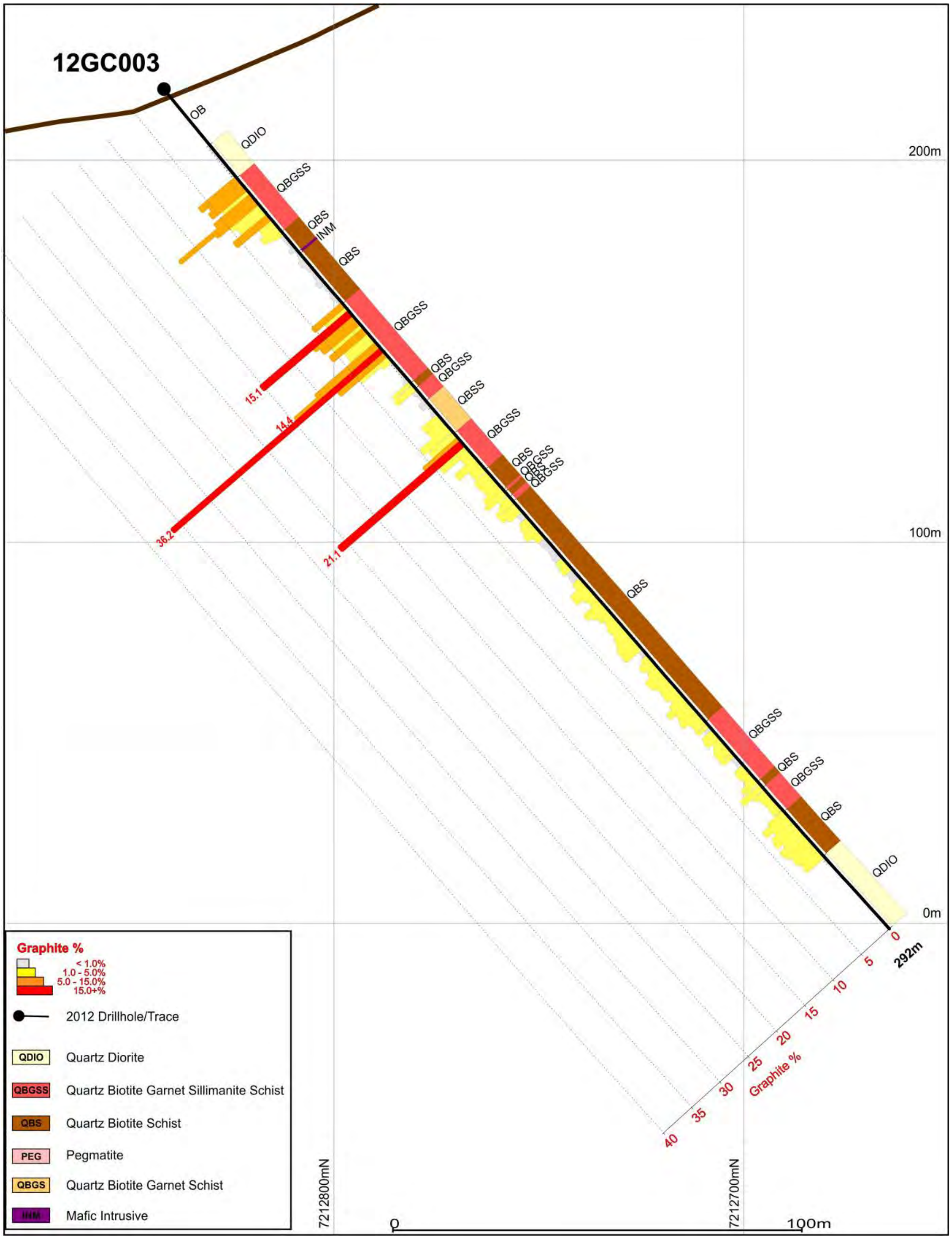
QBS
PEG
FLT
QBS
QBGS
QBS
QBGSS
QBS
21.9
15.1
17.6
18.9
17.5
16.2
16.9
27.2
31.5
35.8
22.9
20.4
40.8
200m
100m
0m
-100m
380m
0
5
10
15
20
25
30
35
40
45
Graphite %
0
100m
7212800mN
7212700mN
Graphite %
< 1.0%
1.0 - 5.0%
5.0 - 15.0%
15.0+%
2012 Drillhole/Trace
QDIO Quartz Diorite
QBGSS Quartz Biotite Garnet Sillimanite Schist
QBS Quartz Biotite Schist
PEG Pegmatite
QBGS Quartz Biotite Garnet Schist
INM Mafic Intrusive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INM
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QBS
QBGSS
QBSS
QBGSS
QBS
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QBGSS
QBS
QBGSS
QBS
QBGSS
QBS
QDIO
15.1
14.4
36.2
21.1
200m
100m
0m
0
5
10
15
20
25
30
35
40
Graphite %
292m
Graphite %
< 1.0%
1.0 - 5.0%
5.0 - 15.0%
15.0+%
2012 Drillhole/Trace
QDIO Quartz Diorite
QBGSS Quartz Biotite Garnet Sillimanite Schist
QBS Quartz Biotite Schist
PEG Pegmatite
QBGS Quartz Biotite Garnet Schist
INM Mafic Intrusive
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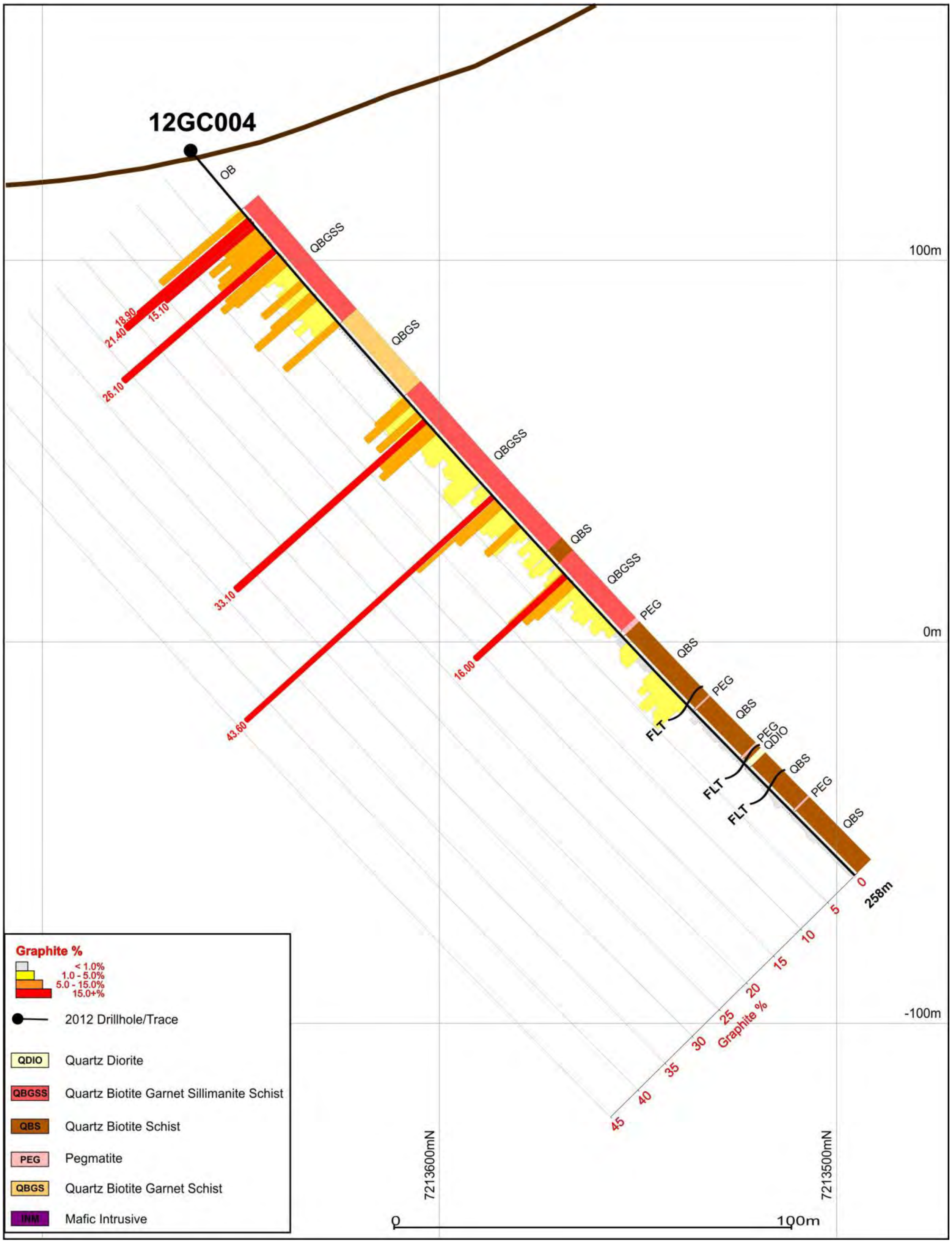

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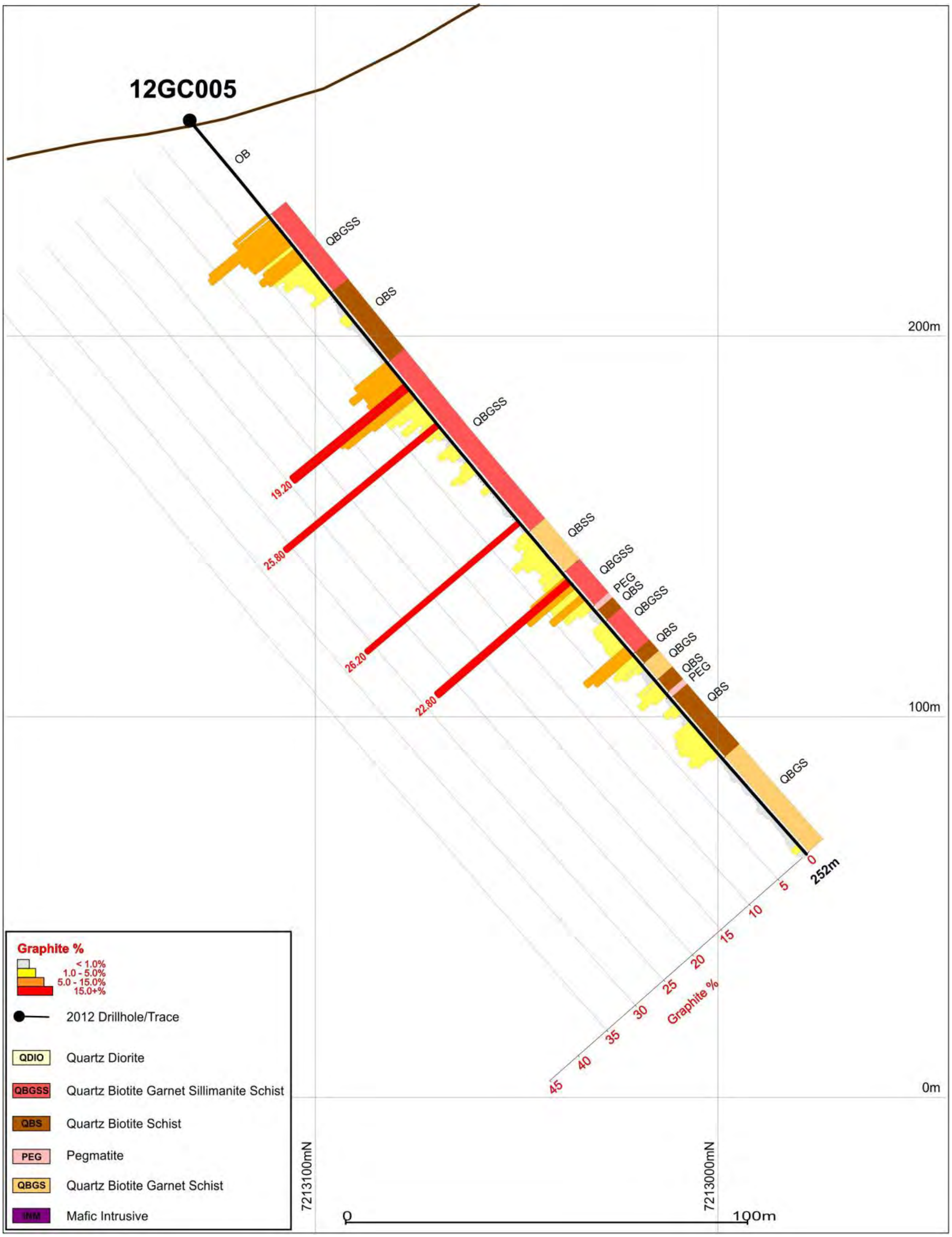
QBGSS
QBS
QBGSS
PEG
QBS
PEG
QBS
PEG
QDIO
QBS
PEG
QBS
FLT
FLT
FLT
18.90
21.40
15.10
26.10
33.10
43.60
16.00
100m
0m
-100m
0
5
10
15
20
25
30
35
40
45
Graphite %
258m
7213600mN
7213500mN
0
100m
Graphite %
< 1.0%
1.0 - 5.0%
5.0 - 15.0%
15.0+%
2012 Drillhole/Trace
QDIO Quartz Diorite
QBGSS Quartz Biotite Garnet Sillimanite Schist
QBS Quartz Biotite Schist
PEG Pegmatite
QBGS Quartz Biotite Garnet Schist
INM Mafic Intrusive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QBGSS
QBSS
QBGSS
PEG
QBS
QBGSS
QBS
QBGS
QBS
PEG
QBS
QBGS
252m
200m
100m
0m
19.20
25.80
26.20
22.80
0
5
10
15
20
25
30
35
40
45
Graphite %
Graphite %
< 1.0%
1.0 - 5.0%
5.0 - 15.0%
15.0+%
2012 Drillhole/Trace
QDIO Quartz Diorite
QBGSS Quartz Biotite Garnet Sillimanite Schist
QBS Quartz Biotite Schist
PEG Pegmatite
QBGS Quartz Biotite Garnet Schist
Mafic Intrusive
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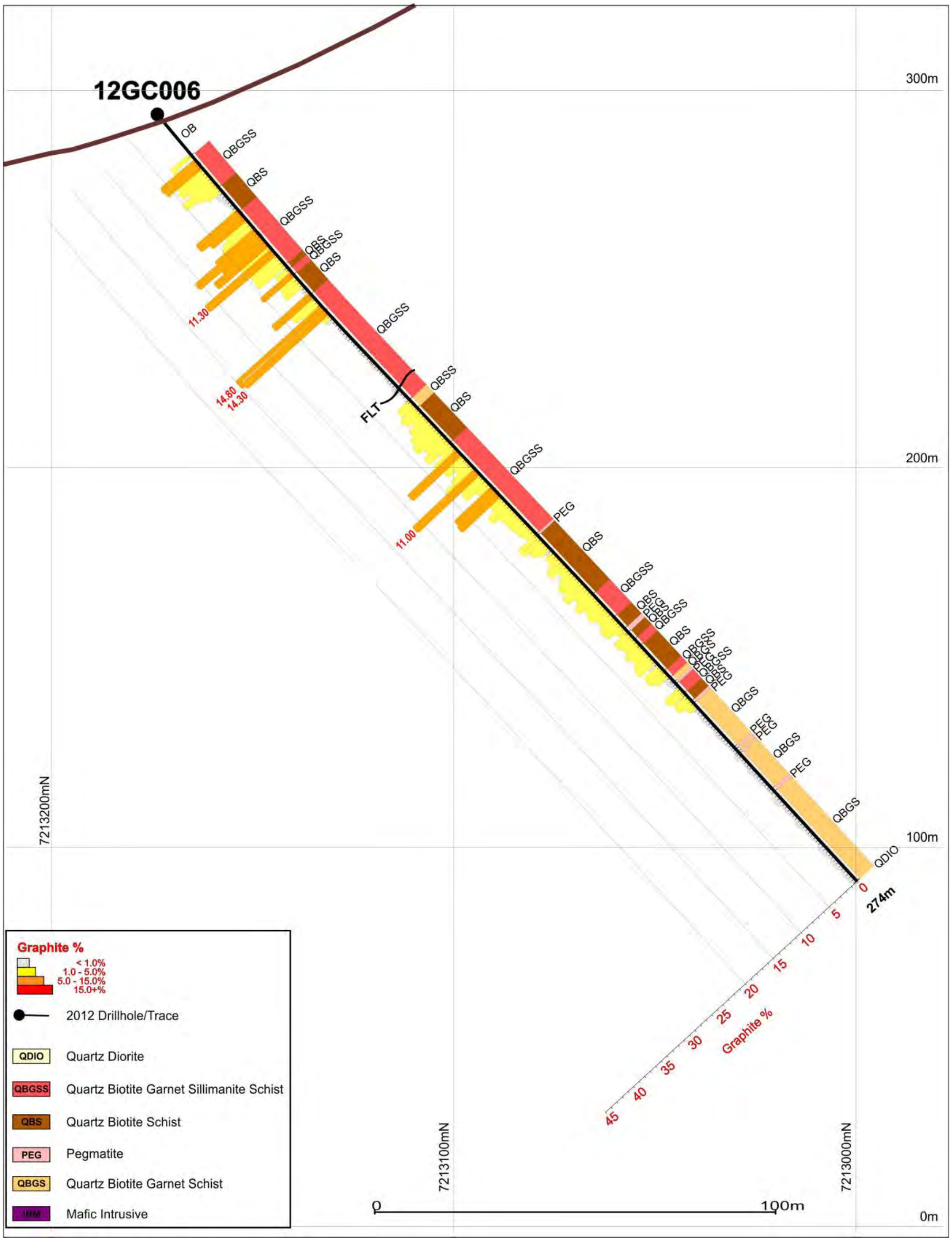
100m



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FLT
PEG
QBGS
QDIO
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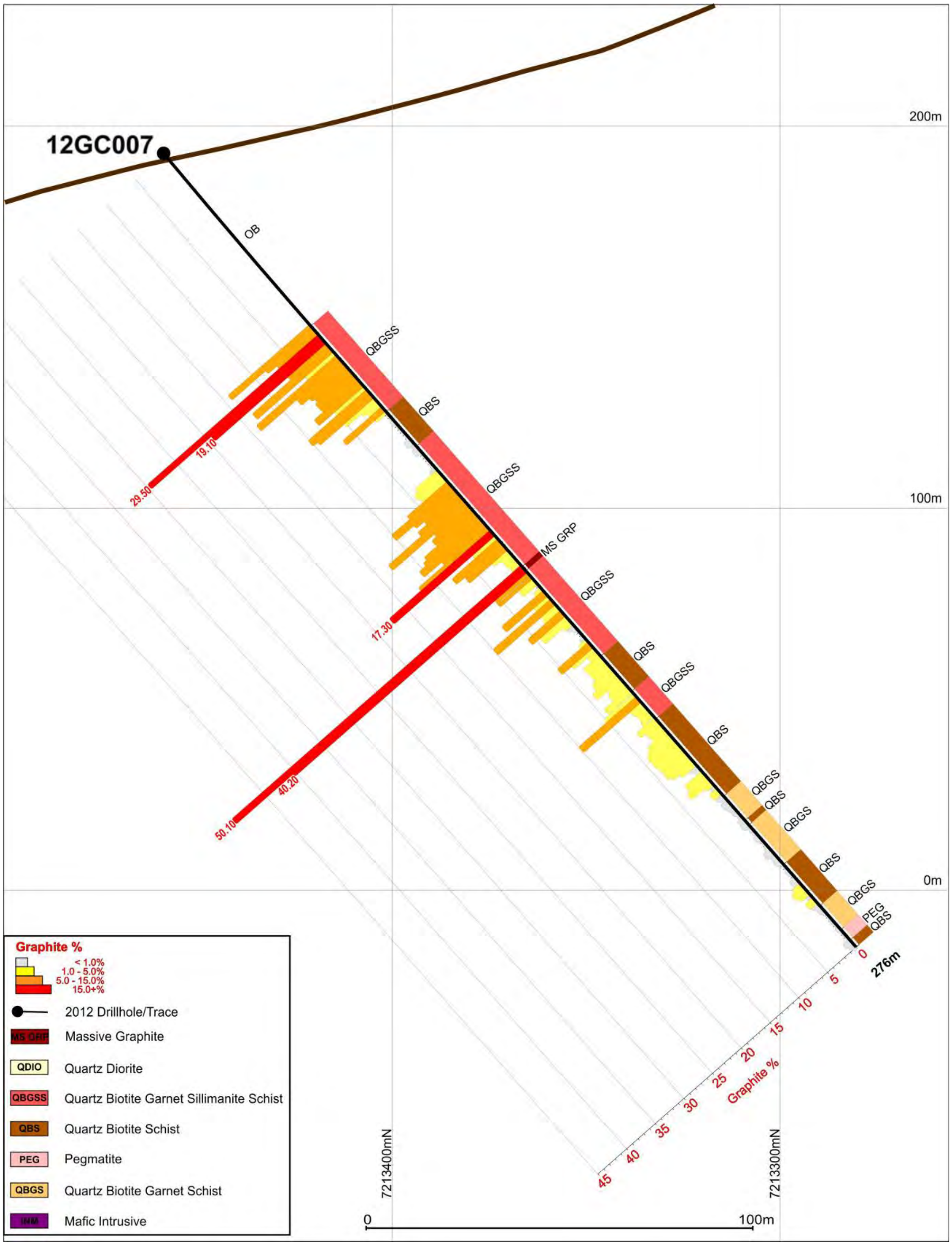
14.80
14.30
11.00
274m
300m
200m
100m
0m
7213200mN
7213100mN
7213000mN
0 5 10 15 20 25 30 35 40 45
Graphite %
0
100m
Graphite %
< 1.0%
1.0 - 5.0%
5.0 - 15.0%
15.0+%
2012 Drillhole/Trace
QDIO Quartz Diorite
QBGSS Quartz Biotite Garnet Sillimanite Schist
QBS Quartz Biotite Schist
PEG Pegmatite
QBGS Quartz Biotite Garnet Schist
Mafic Intrusive



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QBGSS
MS GRP
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QBS
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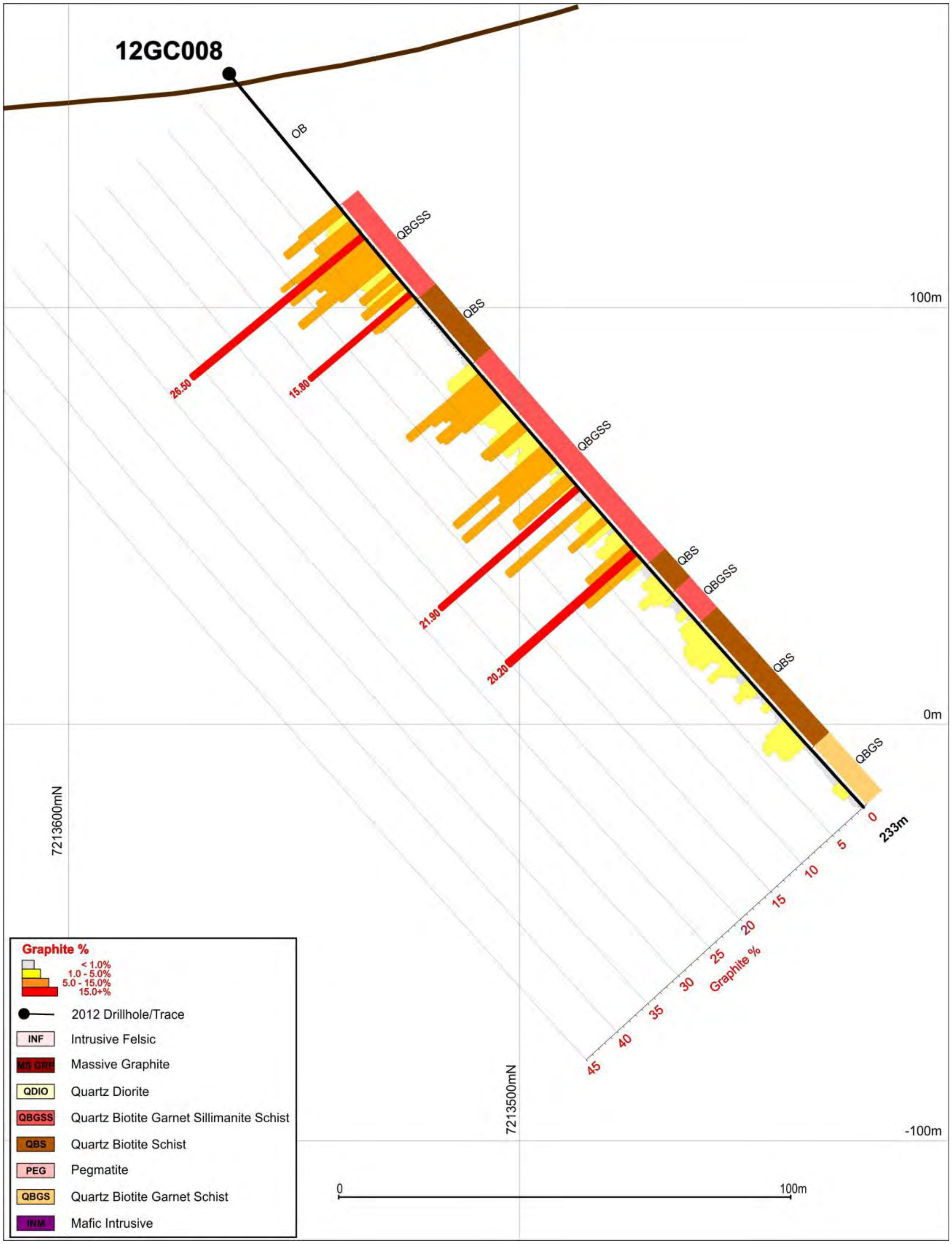
QBGS
QBS
QBGS
QBS
QBGS
PEG
QBS
276m
19.10
29.50
17.30
40.20
50.10
0
5
10
15
20
25
30
35
40
45
Graphite %
7213400mN
7213300mN
0
100m
Graphite %
< 1.0%
1.0 - 5.0%
5.0 - 15.0%
15.0+%
2012 Drillhole/Trace
MS GRP Massive Graphite
QDIO Quartz Diorite
QBGSS Quartz Biotite Garnet Sillimanite Schist
QBS Quartz Biotite Schist
PEG Pegmatite
QBGS Quartz Biotite Garnet Schist
IMM Mafic Intrusive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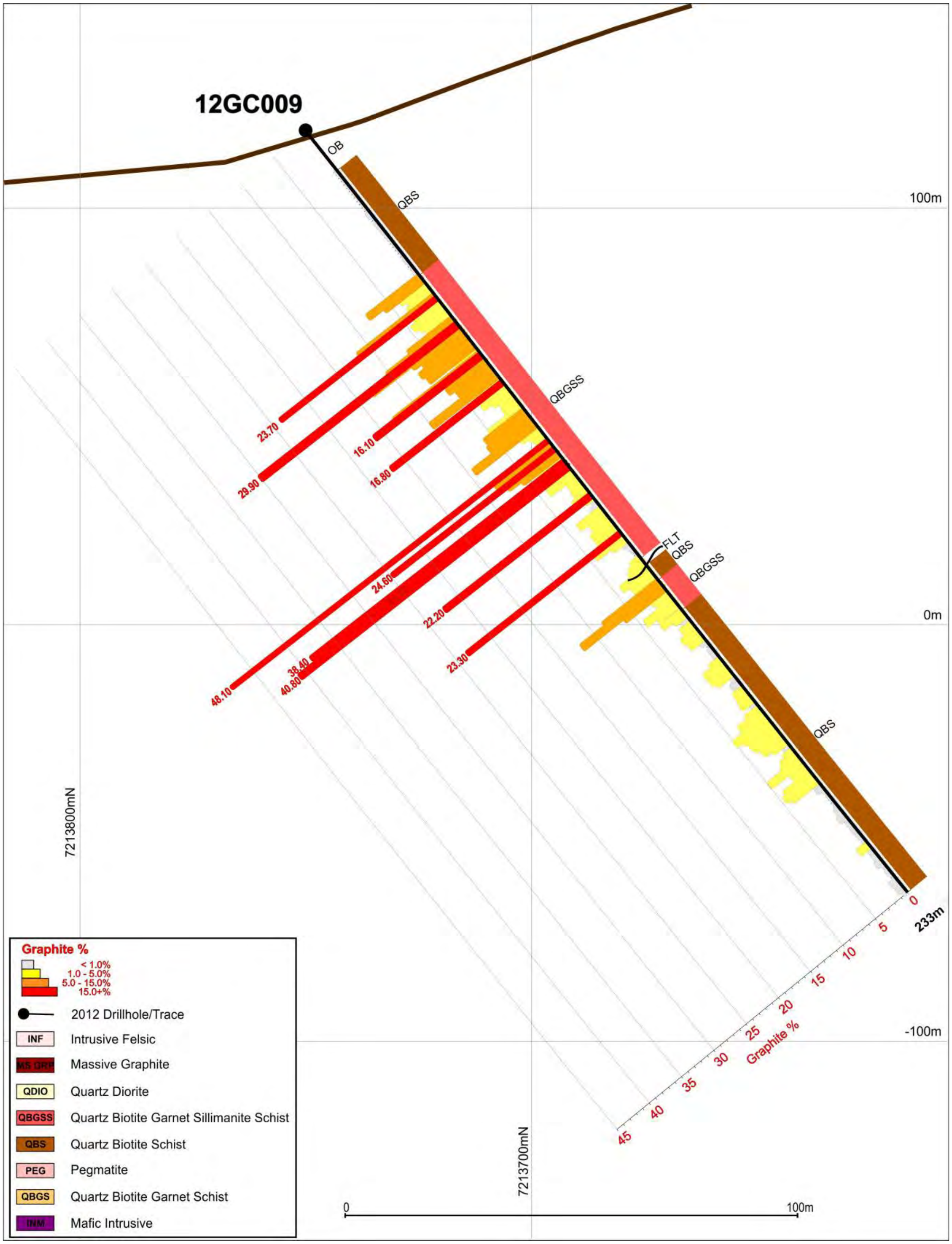
0m
-100m
7213600mN
7213500mN
233m
0
5
10
15
20
25
30
35
40
45
Graphite %
0
100m
Graphite %
< 1.0%
1.0 - 5.0%
5.0 - 15.0%
15.0+%
2012 Drillhole/Trace
INF Intrusive Felsic
MS GRP Massive Graphite
QDIO Quartz Diorite
QBGSS Quartz Biotite Garnet Sillimanite Schist
QBS Quartz Biotite Schist
PEG Pegmatite
QBGS Quartz Biotite Garnet Schist
INM Mafic Intrusive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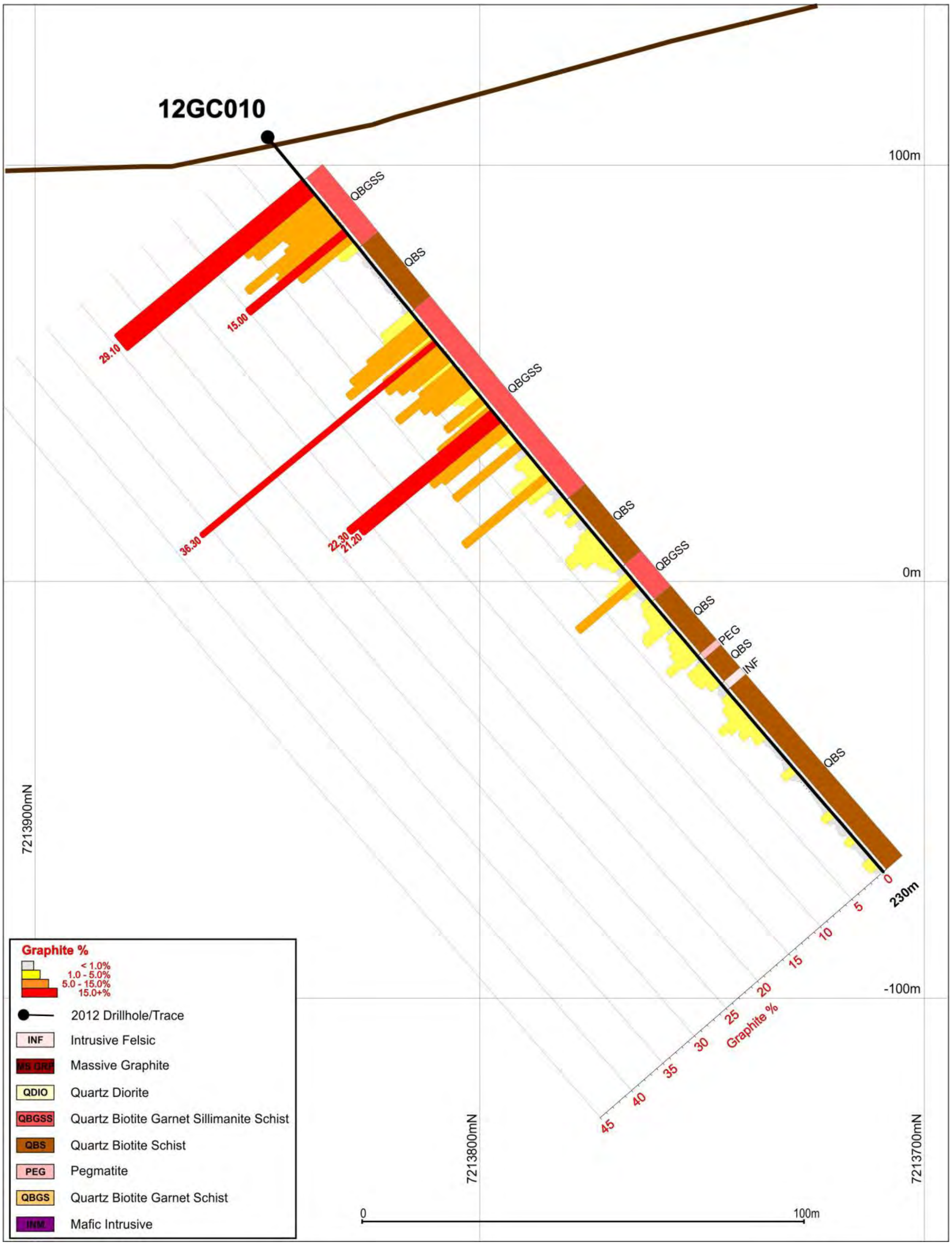
16.80
24.60
22.20
23.30
48.10
38.40
40.80
7213800mN
7213700mN
0
5
10
15
20
25
30
35
40
45
Graphite %
233m
0
100m
Graphite %
< 1.0%
1.0 - 5.0%
5.0 - 15.0%
15.0+%
2012 Drillhole/Trace
INF Intrusive Felsic
MS GRP Massive Graphite
QDIO Quartz Diorite
QBGSS Quartz Biotite Garnet Sillimanite Schist
QBS Quartz Biotite Schist
PEG Pegmatite
QBGS Quartz Biotite Garnet Schist
INM Mafic Intrusive



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INF
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15.00
36.30
22.30
21.20
0
5
10
15
20
25
30
35
40
45
Graphite %
230m
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7213800mN
7213700mN
0
100m
Graphite %
< 1.0%
1.0 - 5.0%
5.0 - 15.0%
15.0+%
2012 Drillhole/Trace
INF Intrusive Felsic
MS GRP Massive Graphite
QDIO Quartz Diorite
QBGSS Quartz Biotite Garnet Sillimanite Schist
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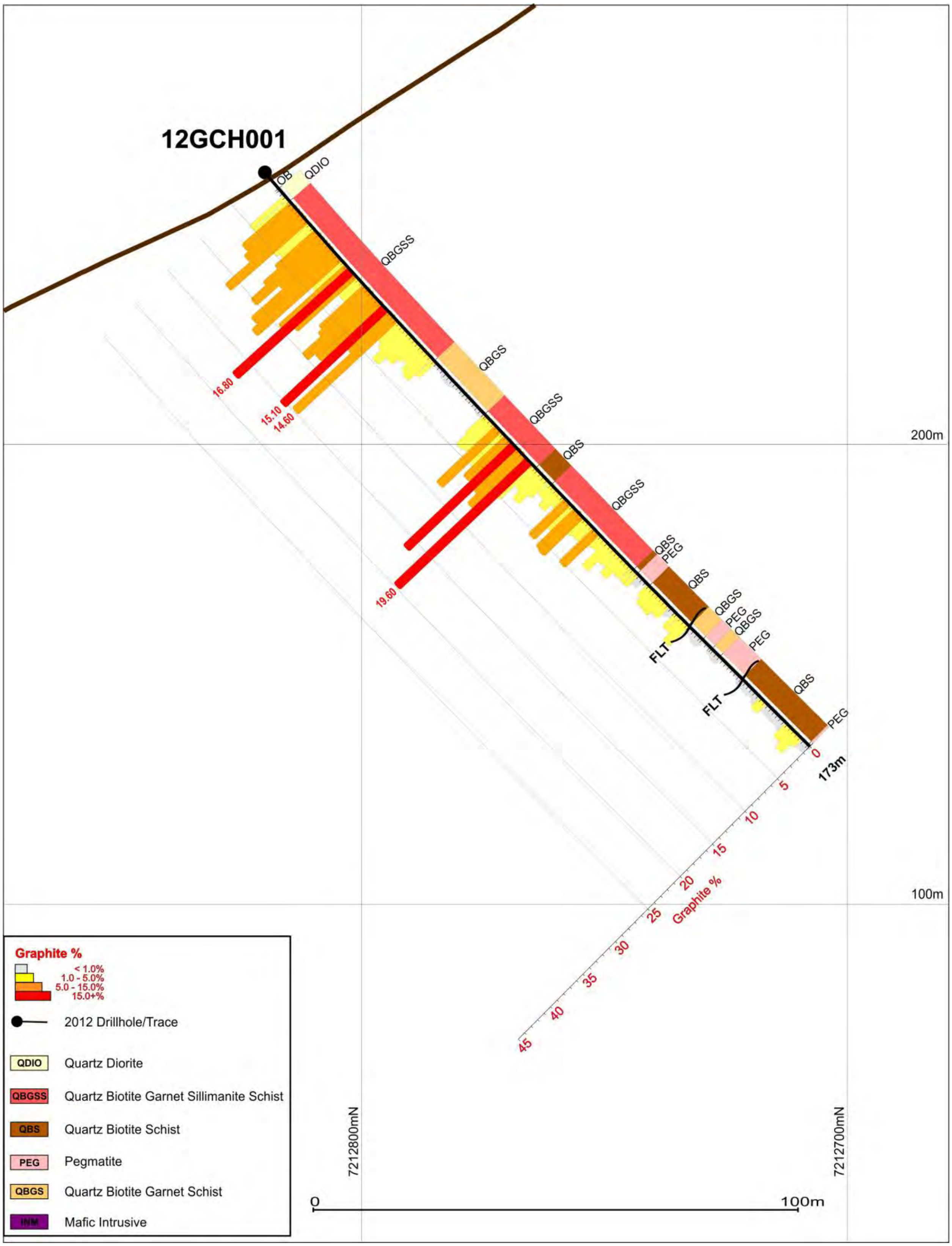
PEG Pegmatite
QBGS Quartz Biotite Garnet Schist
INM Mafic Intrusive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QBS
PEG
FLT
FLT
16.80
15.10
14.60
19.60
0
173m
5
10
15
20
25
30
35
40
45
Graphite %
200m
100m
7212800mN
7212700mN
0
100m
Graphite %
< 1.0%
1.0 - 5.0%
5.0 - 15.0%
15.0+%
2012 Drillhole/Trace
QDIO
Quartz Diorite
QBGSS
Quartz Biotite Garnet Sillimanite Schist
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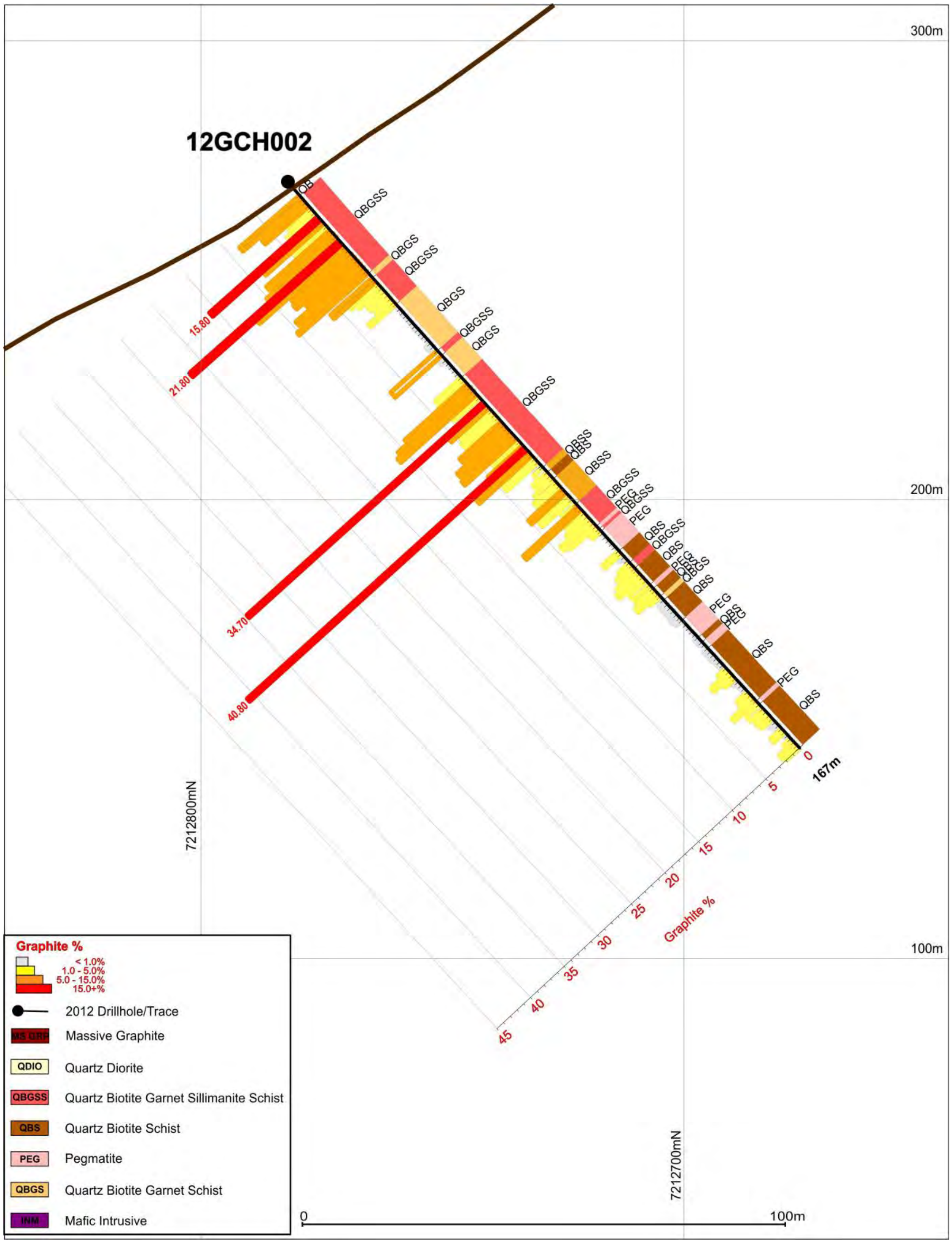
Quartz Biotite Schist
PEG
Pegmatite
QBGS
Quartz Biotite Garnet Schist
INM
Mafic Intrusive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QBGSS
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QBGS
QBGSS
QBSS
QBS
QBSS
QBGSS
PEG
QBGSS
PEG
QBS
QBGSS
QBS
PEG
QBS
QBGSS
QBS
PEG
QBS
PEG
QBS
PEG
QBS
15.80
21.80
34.70
40.80
167m
0
5
10
15
20
25
30
35
40
45
Graphite %
Graphite %
< 1.0%
1.0 - 5.0%
5.0 - 15.0%
15.0+%
2012 Drillhole/Trace
MS GRP
Massive Graphite
QDIO
Quartz Diorite
QBGSS
Quartz Biotite Garnet Sillimanite Schist
QBS
Quartz Biotite Schist
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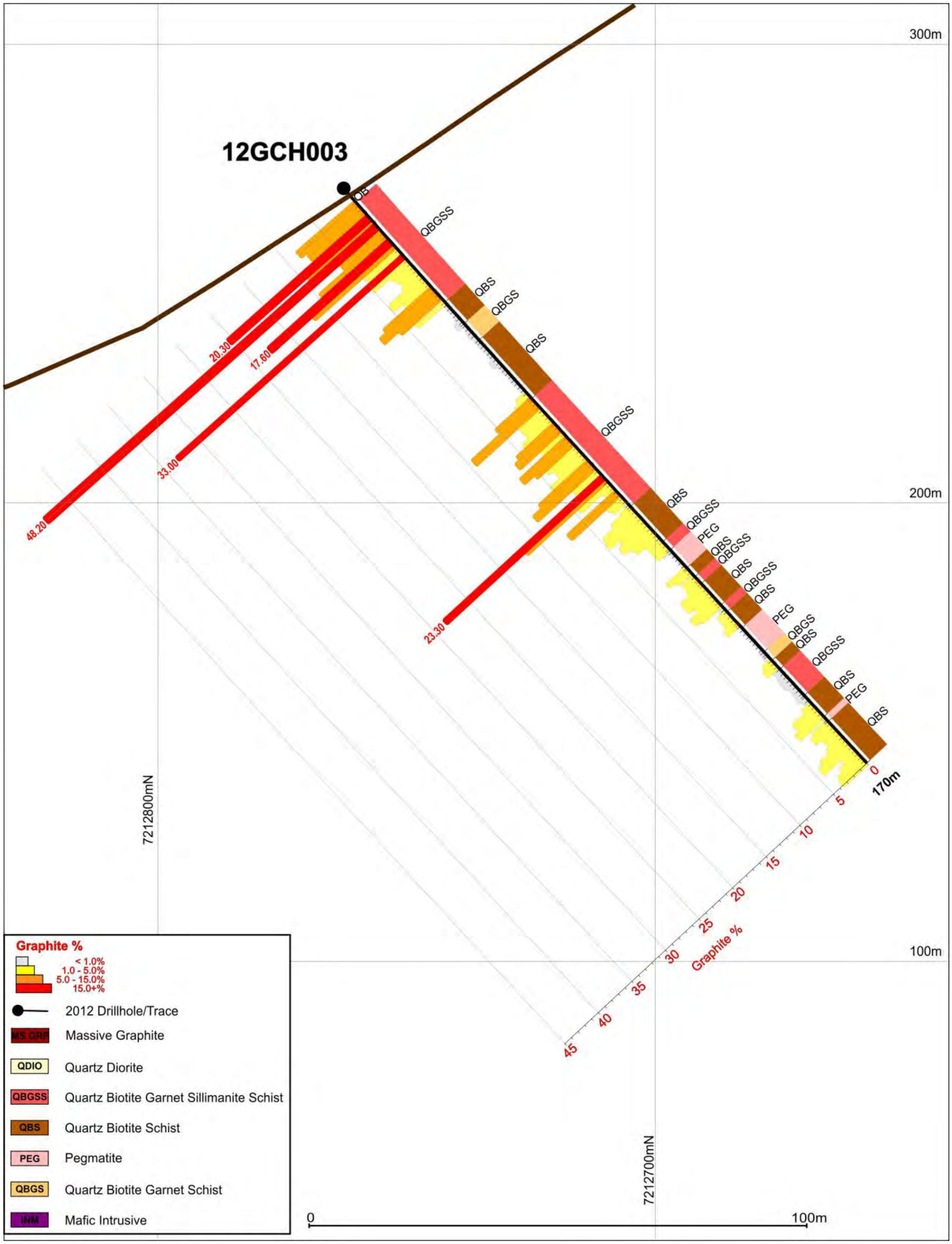
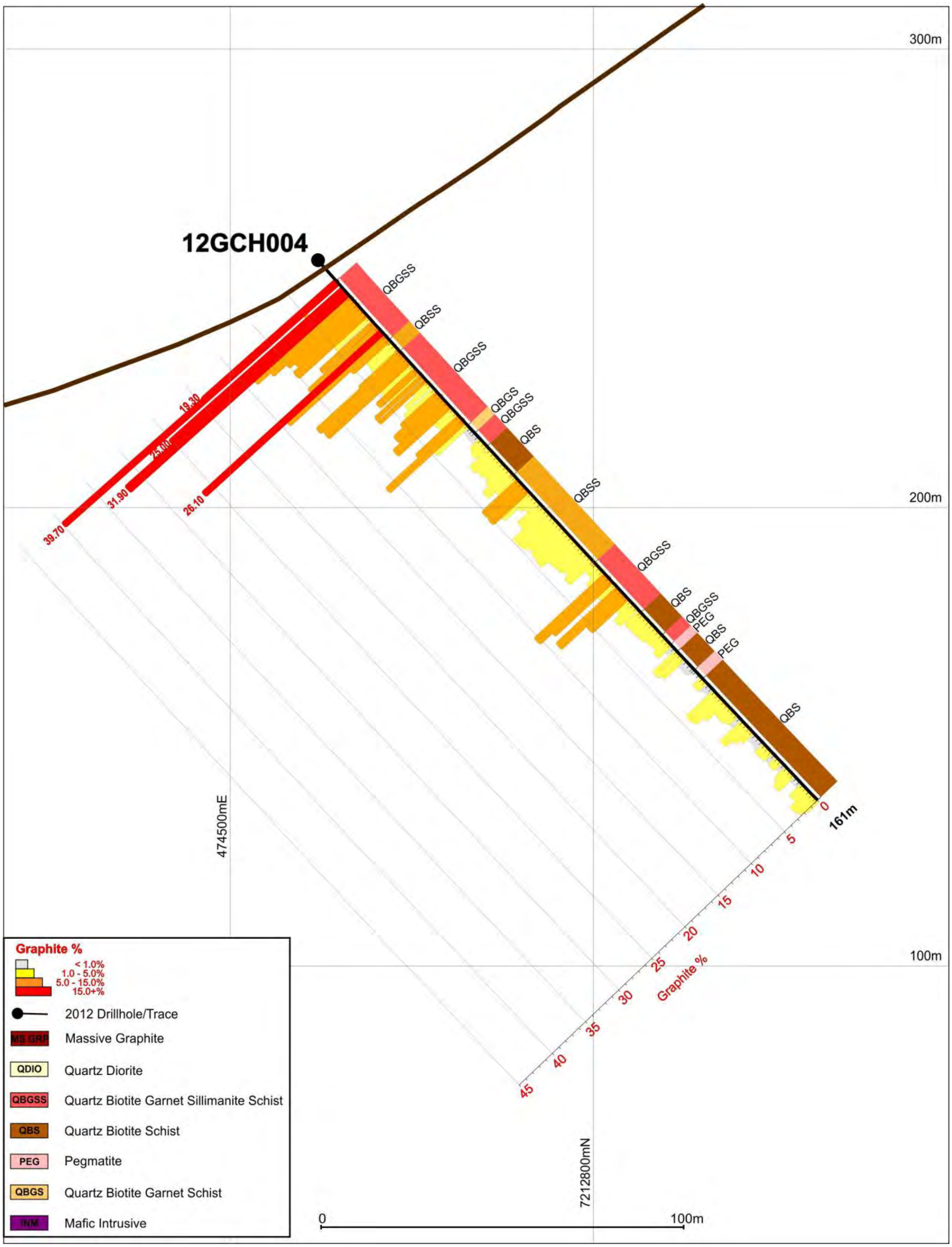
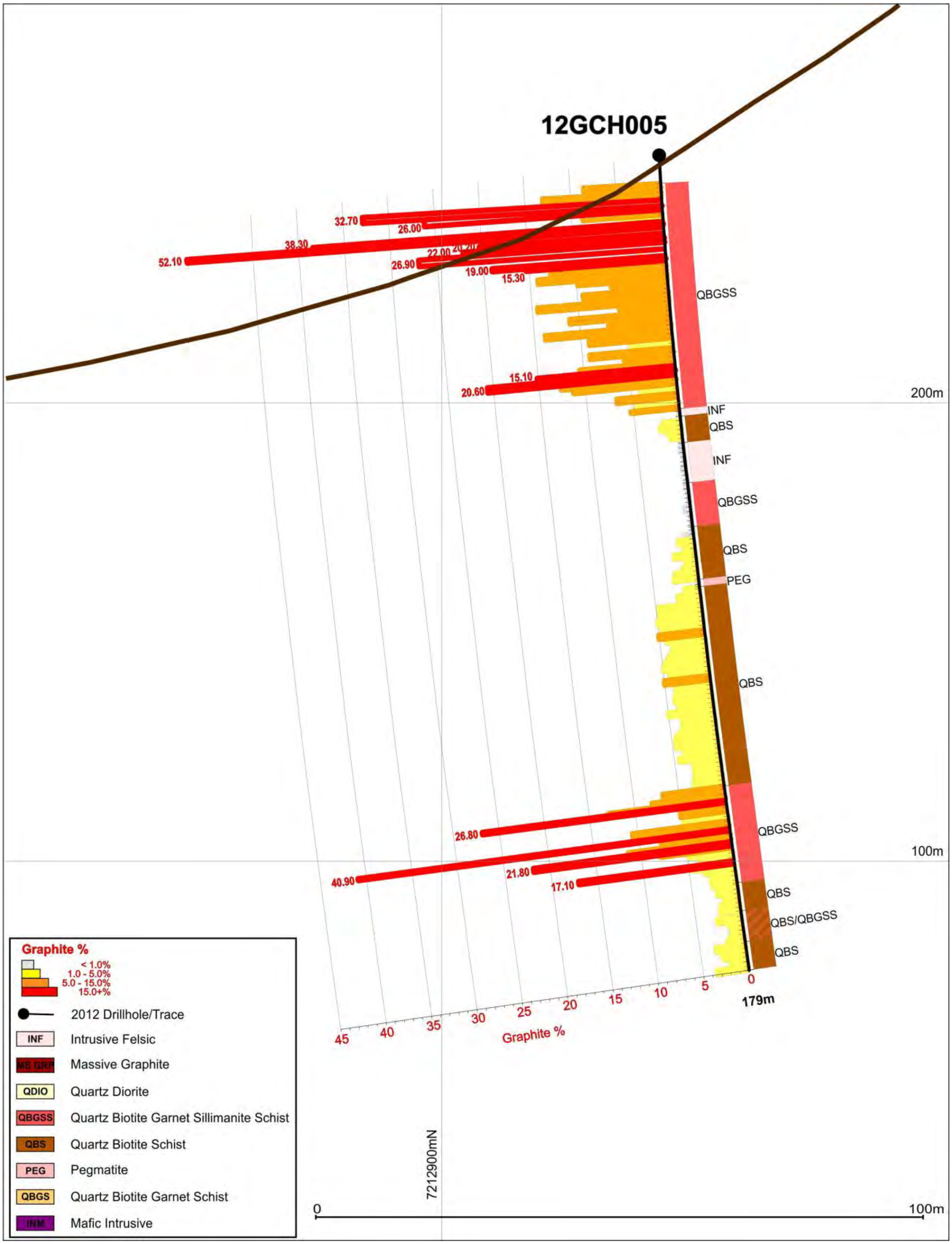
QBGS
Quartz Biotite Garnet Schist
INM
Mafic Intrusive
0
100m

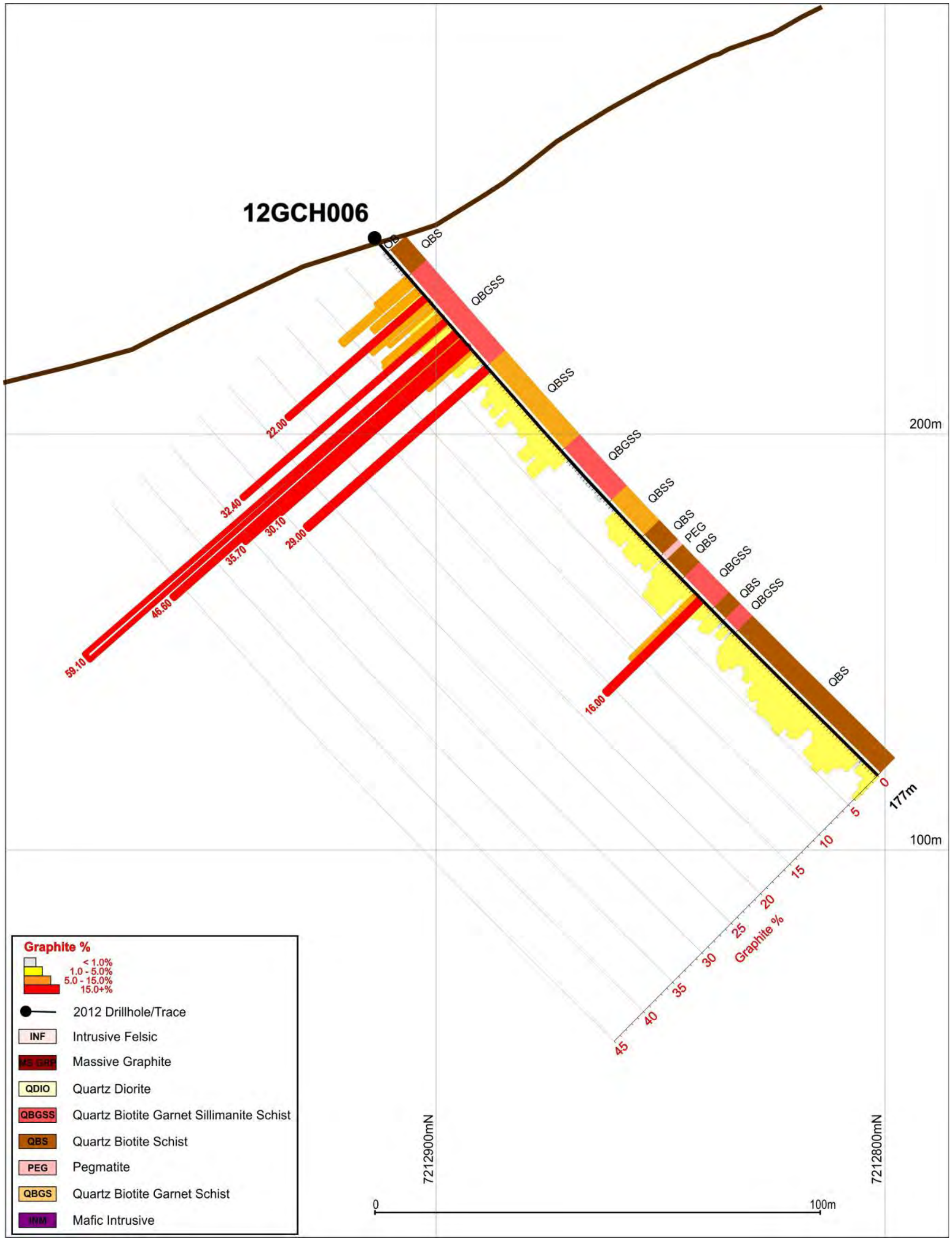


300m
200m
100m
12GCH003
QB
QBGSS
QBS
QBGS
QBS
QBGSS
QBS
QBGSS
PEG
QBS
QBGSS
QBS
QBGSS
QBS
PEG
QBGS
QBS
QBGSS
QBS
PEG
QBS
170m
20.30
17.60
33.00
48.20
23.30
0
5
10
15
20
25
30
35
40
45
Graphite %
7212800mN
7212700mN
Graphite %
< 1.0%
1.0 - 5.0%
5.0 - 15.0%
15.0+%
2012 Drillhole/Trace
MS GRP Massive Graphite
QDIO Quartz Diorite
QBGSS Quartz Biotite Garnet Sillimanite Schist
QBS Quartz Biotite Schist
PEG Pegmatite
QBGS Quartz Biotite Garnet Schist
INM Mafic Intrusive
0
100m

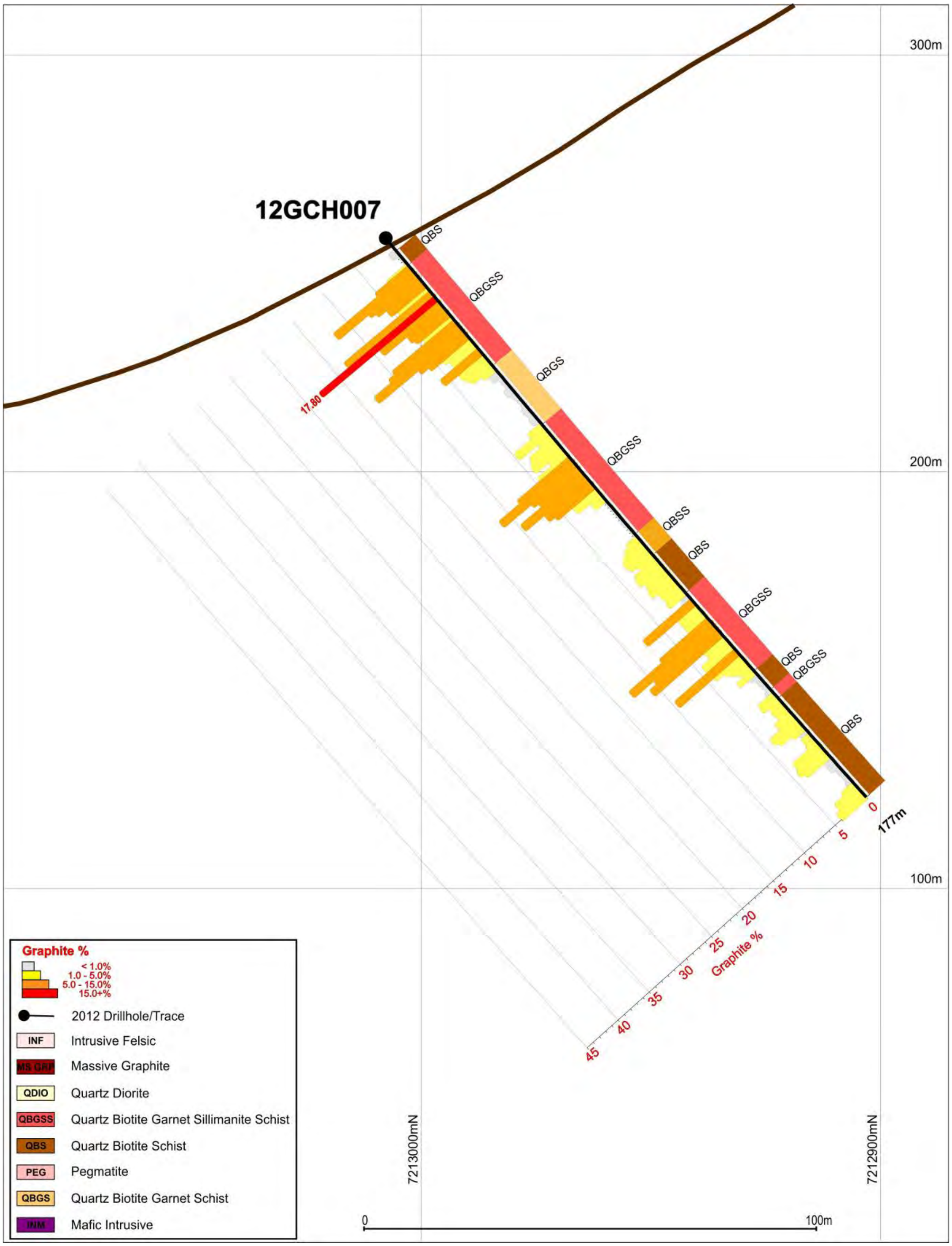


12GCH004
QBGSS
QBSS
QBGSS
QBGS
QBGSS
QBS
QBSS
QBGSS
QBS
QBGSS
PEG
QBS
PEG
QBS
161m
19.30
25.00
31.90
26.10
39.70
300m
200m
100m
474500mE
7212800mN
0
5
10
15
20
25
30
35
40
45
Graphite %
Graphite %
< 1.0%
1.0 - 5.0%
5.0 - 15.0%
15.0+%
2012 Drillhole/Trace
MS GRP
Massive Graphite
QDIO
Quartz Diorite
QBGSS
Quartz Biotite Garnet Sillimanite Schist
QBS
Quartz Biotite Schist
PEG
Pegmatite
QBGS
Quartz Biotite Garnet Schist
INM
Mafic Intrusive
0
100m


12GCH005
32.70
26.00
38.30
52.10
22.00
26.90
19.00
15.30
QBGSS
15.10
20.60
200m
INF
QBS
INF
QBGSS
QBS
PEG
QBS
QBGSS
26.80
100m
40.90
21.80
17.10
QBS
QBS/QBGSS
QBS
179m
0
5
10
15
20
25
30
35
40
45
Graphite %
Graphite %
< 1.0%
1.0 - 5.0%
5.0 - 15.0%
15.0+%
2012 Drillhole/Trace
INF
Intrusive Felsic
Massive Graphite
QDIO
Quartz Diorite
QBGSS
Quartz Biotite Garnet Sillimanite Schist
QBS
Quartz Biotite Schist
PEG
Pegmatite
QBGS
Quartz Biotite Garnet Schist
INM
Mafic Intrusive
7212900mN
0
100m



12GCH006
QB
QBS
QBGSS
QBSS
QBGSS
QBSS
QBS
PEG
QBS
QBGSS
QBS
QBGSS
QBS
200m
100m
22.00
32.40
30.10
29.00
35.70
46.60
59.10
16.00
0
5
10
15
20
25
30
35
40
45
Graphite %
177m
7212900mN
7212800mN
0
100m
Graphite %
< 1.0%
1.0 - 5.0%
5.0 - 15.0%
15.0+%
2012 Drillhole/Trace
INF
Intrusive Felsic
MS GRP
Massive Graphite
QDIO
Quartz Diorite
QBGSS
Quartz Biotite Garnet Sillimanite Schist
QBS
Quartz Biotite Schist
PEG
Pegmatite
QBGS
Quartz Biotite Garnet Schist
INM
Mafic Intrusive


300m
200m
100m
12GCH007
QBS
QBGSS
QBGS
QBGSS
QBSS
QBS
QBGSS
QBS
QBGSS
QBS
17.80
0
5
10
15
20
25
30
35
40
45
Graphite %
177m
Graphite %
< 1.0%
1.0 - 5.0%
5.0 - 15.0%
15.0+%
2012 Drillhole/Trace
INF Intrusive Felsic
MS GRP Massive Graphite
QDIO Quartz Diorite
QBGSS Quartz Biotite Garnet Sillimanite Schist
QBS Quartz Biotite Schist
PEG Pegmatite
QBGS Quartz Biotite Garnet Schist
INM Mafic Intrusive
7213000mN
7212900mN
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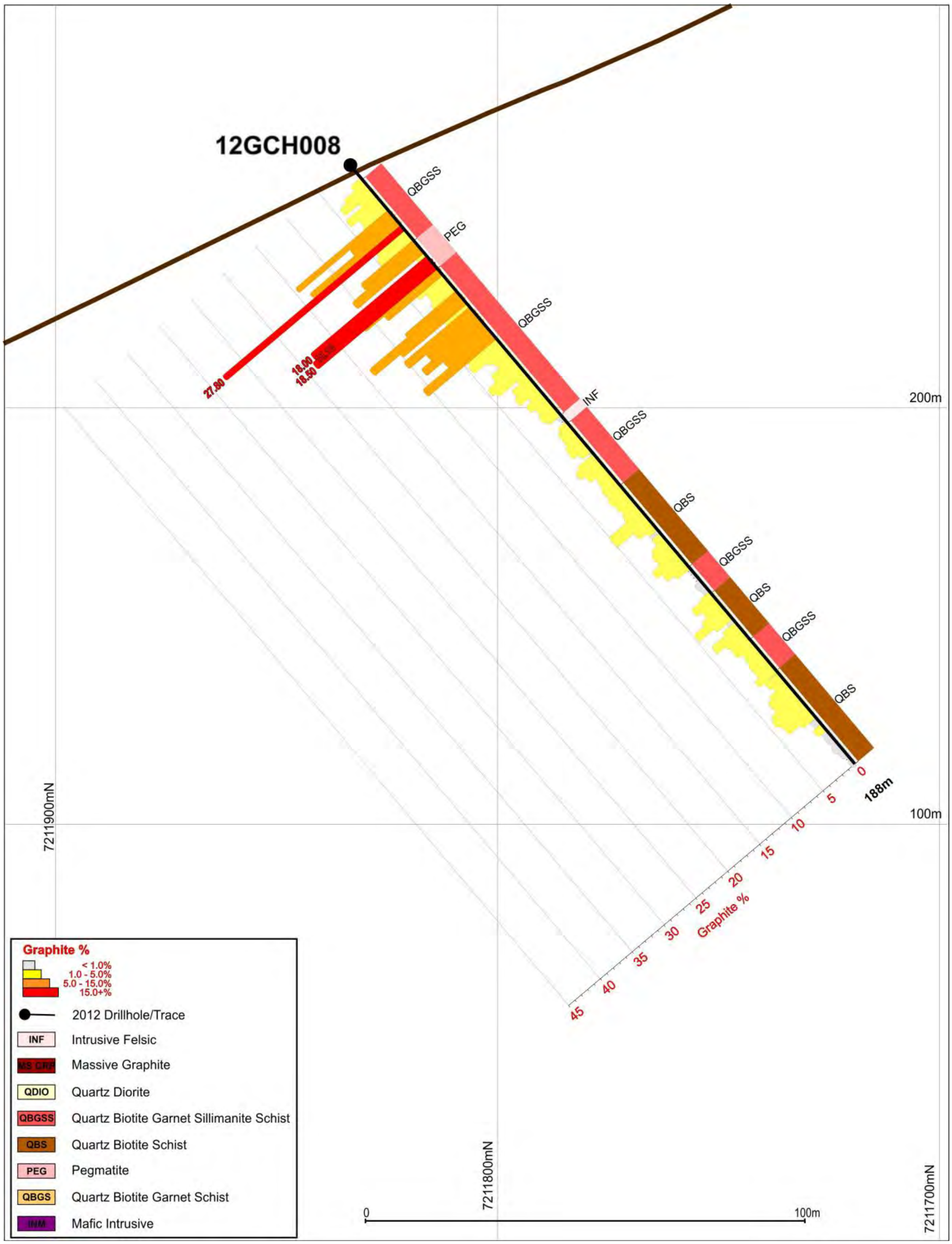
100m


12GCH008
QBGSS
PEG
QBGSS
INF
QBGSS
QBS
QBGSS
QBS
QBGSS
QBS
27.50
18.00
18.50
200m
100m
0
188m
5
10
15
20
25
30
35
40
45
Graphite %
7211900mN
7211800mN
7211700mN
0
100m
Graphite %
< 1.0%
1.0 - 5.0%
5.0 - 15.0%
15.0+%
2012 Drillhole/Trace
INF Intrusive Felsic
MS GRR Massive Graphite
QDIO Quartz Diorite
QBGSS Quartz Biotite Garnet Sillimanite Schist
QBS Quartz Biotite Schist
PEG Pegmatite
QBGS Quartz Biotite Garnet Schist
INM Mafic Intrusive