

**Technical Report**

-- on the --

**Kokanee and Jumbo Graphite Properties**  
**Slocan Mining Division, British Columbia**

-- for --

**Noram Ventures Inc.**

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## SUMMARY

Graphite is a commodity that has recently been of interest due to increased demand in technical applications. The Black Crystal graphite deposit (Eagle), located in southern British Columbia 40 kilometers northwest of Nelson, B.C. has been one of only two operating graphite mines in North America in the past 20 years. The Kokanee and Jumbo graphite properties are located in the West Kootenays, British Columbia, in similar early Palaeozoic geological lithologies. Both properties are controlled by Noram Ventures Inc. (Noram), under option agreement (2012) with Bruce Doyle of Nelson, B.C., the registered and beneficial owner. The 16 Kokanee claims (1680 hectares) are located 50 kilometers east of Nelson, on the east side of Kootenay Lake. The 23 Jumbo claims (10,539 hectares) are located 65 kilometers northwest of Nelson and 25 kilometers southwest of Nakusp, on the west side of the Arrow Lakes. In total, Noram controls 39 claims (12,219 hectares). Access is excellent to each property via paved highways, and then by well-maintained logging roads to most areas of both properties. Both properties are situated in areas of good infrastructure in the foothill areas of the rugged Selkirk and Monashee Mountains.

The Kokanee property was first recognized as having potential for massive Pb/Zn deposits, similar to the Bluebell mine located 13 kilometers to the north. Intensive exploration was initiated by Cominco in the early 1970s. Extensive exploration including geological mapping, geochemistry, ground and airborne geophysical surveys, and diamond drilling were completed in search of massive sulphides. It was the 1977 and 2001 drill programs completed in a strong EM anomaly that identified coarse “flake” graphite mineralization in Cambrian meta-sedimentary rocks. In early 2012, Bruce Doyle recognized “flake” graphite mid-Palaeozoic meta-sedimentary rocks on the Jumbo property. Prior to this, there is no documented history of exploration in the area. The favourable lithologies on both properties are described as quartz-muscovite schist (+/- biotite and feldspar). Graphite occurs as coarse flakes ranging 0.2 to 4.0mm diameter (visual estimate) along cleavage planes within these schists on both properties.

In 2012, Noram completed geological mapping, rock sampling, and 6 diamond drill holes, totaling 1376 meters, along a 1200 meter strike length of the known graphite-bearing horizon on the Kokanee property. On the Jumbo property, Noram completed an airborne geophysical survey (634.3km), geological mapping and rock sampling.

Results of diamond drilling on the Kokanee property show the potential of an economic resource being present in the favourable lithology in all 6 drill holes over the 1200 meter strike length drilled. All holes intersected appreciable graphite over true widths of 60 – 137 meters. The following table summarizes the average grade of graphite over true widths at various cut-off grades of graphite:

| Cut-off<br>% graphite | Avg True<br>thickness | Avg %<br>graphite |
|-----------------------|-----------------------|-------------------|
| 0.5                   | 97.3 meters           | 1.25              |
| <b>1.0</b>            | <b>47.1 meters</b>    | <b>1.72</b>       |
| 1.5                   | 31.8 meters           | 1.95              |



At current market value of “flake” graphite (\$1,500 – 1,750/T), a cut-off grade of 1.0% graphite has been selected as the most appropriate for resource definition. At this cut-off, potential tonnage of 15MT to 22.5MT @ grades ranging 1.65 – 1.80% graphite\* is estimated to be present within the 1200 strike length drilled and to down-dip depths of 150 meters. The zone is open along both strike directions and at depth.

\*The potential quantity and grade is conceptual in nature; there has been insufficient exploration to define a mineral resource; and it is uncertain if further exploration will result in the target being delineated as a mineral resource.

Rock chip samples collected on the Jumbo property indicate grades ranging from 0.5% to 7.3%. The airborne electromagnetic survey was very useful in delineating the rather sinuous favourable graphite horizon in the Silver Creek Formation. An overall strike length of 35 kilometers of this lithology has been identified. Three specific areas within have been identified as primary targets for initial drill testing.

The quality of graphite from both properties has yet to be determined. Early “flake-size” tests were deemed of no value as the liberation of graphite flakes from rock was not definitive. The visual estimate that all graphite exceeds a diameter of 0.2mm would indicate most graphite is sufficiently coarse and of good value. Further metallurgical testing is definitely recommended in ongoing work programs for both properties.

A potential resource is indicated over a 1200 meter strike length on the **Kokanee** property. Additional diamond drilling at 200 meter intervals is recommended along the full strike length of the known host lithology, consisting of eight holes (2000 meters) at an estimated cost of **\$430,000**. This program includes preliminary metallurgical testing.

Three areas have been selected for drilling on the **Jumbo** property. Seven diamond drill holes are recommended, totaling 2100 meters, which is estimated to cost **\$450,000**. This program includes preliminary metallurgical testing.

In summary, diamond drill programs totaling 4100 meters at estimated costs of **\$880,000** are recommended for continued exploration on the Noram graphite properties.

## INTRODUCTION

### **General Statement and Terms of Reference:**

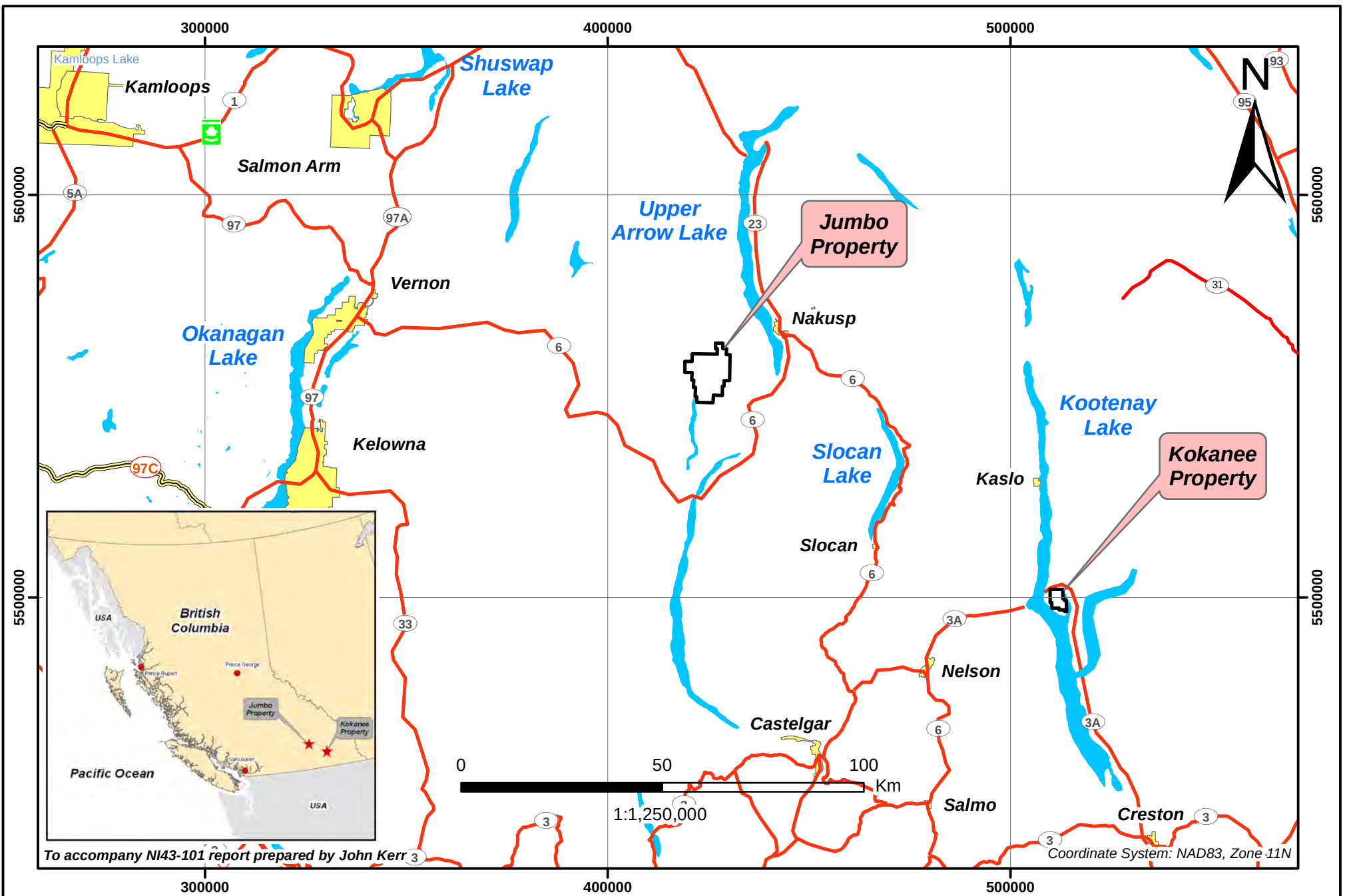
Bruce Doyle, the beneficial owner of 39 claims, has entered into two option agreements with Noram Ventures Inc. (Noram), dated June 8 and August 23, 2012, to sell 100% interest of his claims. 16 claims comprise the Kokanee Property and 23 claims comprise the Jumbo Property. Mr. David Rees, President of Noram, requested that I examine the properties, compile all available data and prepare this report to NI43-101 standards. The report is being prepared to support ongoing work programs and financings of Noram. I visited both sites on April 10/11 (Kokanee only), June 14/15 and October 24/25, 2012 and was a **Qualified Person**, as defined in NI 43-101, at the time of these property examinations. Data used for preparation of this report are cited in section entitled References. This report integrates the results of 2012 drill and airborne geophysical programs with historical data, and provides the basis for recommending ongoing work programs on both properties.

“Flake” graphite is defined as crystalline graphite, with crystals sufficiently larger than 80 mesh screen size (0.18mm). High quality “flake” graphite has recently commanded a strong value due to increasing demand in high technical applications such as lithium batteries, having value as high as \$3000/tonne in mid-2012. Currently “flake” graphite has a value of \$1500 – 1750/tonne. “Amorphous” or “bulk” graphite is the more common variety and is much finer grained than flake graphite, for uses in steel manufacturing, lubricants and pencils. The quality of the **Kokanee and Jumbo Graphite Properties** graphite has never been definitively tested, however visual examination reveals >80% of the visible graphite is coarse crystals exceeding 0.18mm in diameter. Both properties offer potential of hosting an economic graphite deposit.

One of only two operating graphite mines in North America during the past 20 years is the Black Crystal deposit (Eagle mine) in the same general area and geological terrane as the Kokanee and Jumbo properties.

### **RELIANCE on OTHER EXPERTS**

This report is partially based on technical data that was collected in the 1960s through 1990s, and maintained by various property owners throughout the past 50 years. The writer relies on the quality of work of previous operators, their integrity of reporting, and has no reason to doubt the accuracy of the historical data. Claim information and title data has been provided to me by the Company and a review of these records at the British Columbia Mineral Titles office of British Columbia verifies title data and title expiry dates. There has been no legal land title search or environmental evaluation provided to the writer.



Noram Ventures Inc.

# Kokanee and Jumbo Graphite Properties, Slocan Mining Division, British Columbia Property Locations

February, 2013

Figure 1

## PROPERTY DESCRIPTION and LOCATION

Mineral tenures in British Columbia are acquired through an internet-based mineral titles administration system. It is assumed, therefore, that the Kokanee and Jumbo properties are precisely as shown on the province's mineral tenure map and displayed in Figure 2a and 2b. The tenures are for mineral rights only and do not include surface rights. Under the current Mineral Tenure Act, maintaining a mineral tenure (claim) in B.C. for the first two years after issuance requires annual exploration expenditures of \$5.00 per hectare. Required annual exploration expenditures increase incrementally every 2 years as follows:

- Years 3 and 4; \$10.00 per hectare per year
- Years 5 and 6; \$15.00 per hectare per year
- Year 7 and beyond; \$20.00 per hectare per year

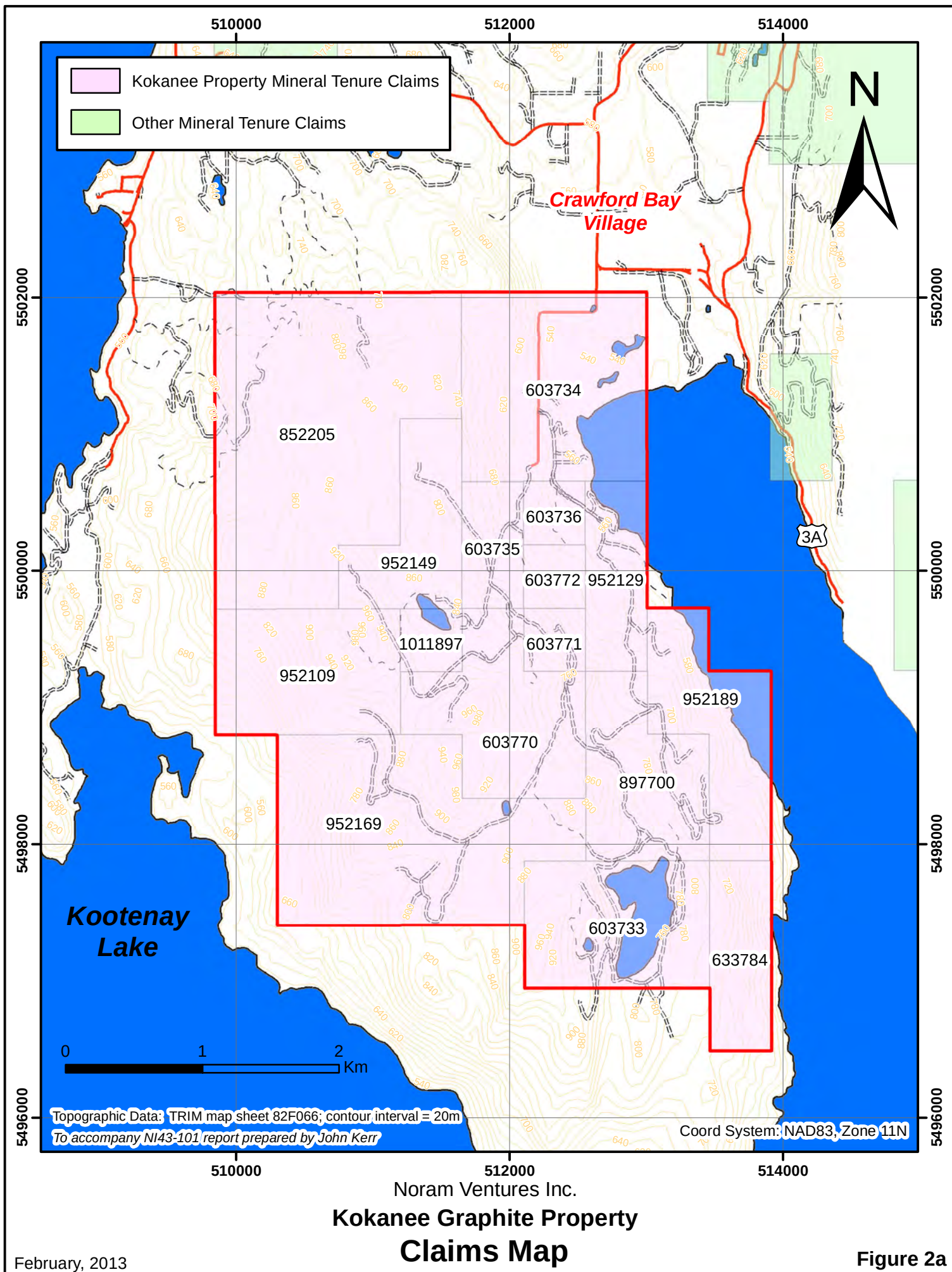
**Kokanee Property:** The Kokanee property consists of sixteen contiguous mineral claims located in the Slocan Mining Division in compliance with the regulations of the Ministry of Mines and Petroleum Resources (MEMPR) of the Province of British Columbia (B.C.), comprising approximately 1680 hectares (see Figure 2a for details).

The Kokanee Property is located in southeastern British Columbia approximately at Crawford Bay, 50 kilometers east of Nelson and on the east side of Kootenay Lake. The property is located on NTS map sheet 82F/10W in the Slocan Mining Division. Geographic coordinates are 5499000N; and 512000E.

All of the claims are recorded in the name of Bruce Anthony Doyle (Doyle). Doyle has entered into an agreement dated June 8, 2012 with Noram Ventures Inc., whereby Noram can earn a 100% interest in the property by paying \$100,000 and issuing 1,000,000 shares to the vendors over a 2 year option period. The claims are subject to a 3%NSR interest, which 2% can be purchased at any time by Noram for \$2.0 million. The following is a list of the claims, with pertinent information regarding title, ownership, current term and size:

| <b>Tenure No</b> | <b>No of Cells</b> | <b>Area (h/a)</b> | <b>Expiry Date*</b> |
|------------------|--------------------|-------------------|---------------------|
| 603733           | 6                  | 125.52            | July 20, 2022       |
| 603734           | 9                  | 188.14            | July 20, 2022       |
| 603735           | 2                  | 41.82             | July 20, 2022       |
| 603736           | 1                  | 20.91             | July 20, 2022       |
| 603770           | 6                  | 125.48            | July 20, 2022       |
| 603771           | 1                  | 20.91             | July 20, 2022       |
| 603772           | 1                  | 20.91             | July 20, 2022       |
| 633784           | 3                  | 62.77             | July 20, 2022       |
| 852205           | 16                 | 333.94            | July 20, 2022       |
| 897700           | 5                  | 104.58            | July 20, 2022       |
| 952109           | 6                  | 123.74            | July 20, 2022       |
| 952129           | 3                  | 62.73             | July 20, 2022       |
| 952149           | 4                  | 83.64             | July 20, 2022       |
| 952169           | 12                 | 239.51            | July 20, 2022       |
| 952189           | 5                  | 104.58            | July 20, 2022       |
| 1011897          | 1                  | 20.91             | August 8, 2022      |
| <b>Totals</b>    | <b>81</b>          | <b>1680.08</b>    |                     |

\*Expiry Date as on Government records February 10, 2013



The northeast corner of the property (Tenure No 603734) falls within the village of Crawford Bay, and many parcels of Residential and Commercial properties exist on this claim. It would be extremely difficult to access minerals underlying this claim. Recreational properties are located around Crystal Lake (Tenure 603733) and McGregor Lake (Tenure 1011897) and permission of the owners will have to be granted to allow mine access. A communications and microwave tower exists on Tenure 952109. Timber Licenses have been granted on all areas of the claims.

**Jumbo Property:** The Jumbo property consists of twenty-three contiguous mineral claims located in the Slocan Mining Division in compliance with the regulations of the Ministry of Mines and Petroleum Resources (MEMPR) of the Province of British Columbia (B.C.), comprising approximately 10,539 hectares (see Figure 2b for details).

The Jumbo Property is located in southeastern British Columbia, approximately 65 kilometers northwest of Nelson, 25 kilometers southwest of Nakusp and on the west side of the Arrow Lakes. The property is located on NTS map sheets 82L/01 and 82K/04 in the Slocan Mining Division. Geographic coordinates of the center of the property are 557000N; and 425000E.

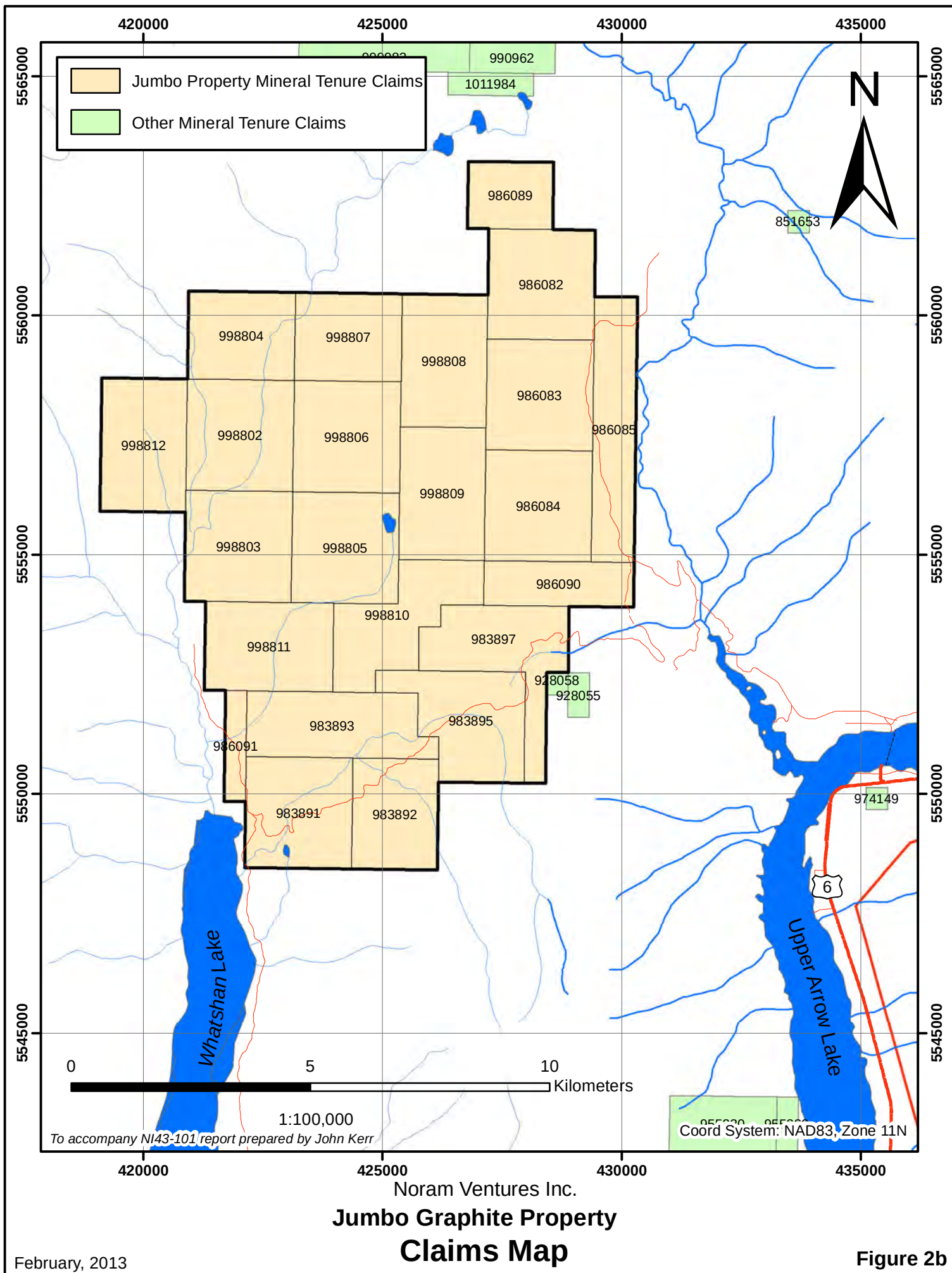
All of the claims are recorded in the name of Bruce Anthony Doyle (Doyle). Doyle has entered into an agreement dated August 23, 2012 with Noram Ventures Inc., whereby Noram can earn a 100% interest in the property by paying \$205,000 and issuing 1,400,000 shares to the vendors over a two year period. The claims are subject to a 3%NSR interest, which 1% can be purchased by Noram at any time for \$1.0 million. The following is a list of the claims, with pertinent information regarding title, ownership, current term and size:

| <b>Tenure No</b> | <b>No of Cells</b> | <b>Area (h/a)</b> | <b>Expiry Date*</b> |
|------------------|--------------------|-------------------|---------------------|
| 983891           | 25                 | 518.21            | May 3, 2016         |
| 983892           | 20                 | 414.57            | May 3, 2016         |
| 983893           | 25                 | 518.04            | May 3, 2016         |
| 983895           | 25                 | 518.03            | May 3, 2016         |
| 983897           | 25                 | 517.90            | May 3, 2016         |
| 986082           | 25                 | 517.15            | May 13, 2016        |
| 986083           | 25                 | 517.37            | May 13, 2016        |
| 986084           | 25                 | 517.59            | May 13, 2016        |
| 986085           | 24                 | 496.73            | May 13, 2016        |
| 986089           | 12                 | 248.15            | May 13, 2016        |
| 986090           | 14                 | 289.93            | May 13, 2016        |
| 986091           | 5                  | 103.62            | May 13, 2016        |
| 998802           | 25                 | 517.46            | June 19, 2016       |
| 998803           | 25                 | 517.68            | June 19, 2016       |
| 998804           | 20                 | 413.82            | June 19, 2016       |
| 998805           | 25                 | 517.68            | June 19, 2016       |
| 998806           | 25                 | 517.46            | June 19, 2016       |
| 998807           | 20                 | 413.82            | June 19, 2016       |
| 998808           | 24                 | 496.63            | June 19, 2016       |
| 998809           | 24                 | 496.87            | June 19, 2016       |
| 998810           | 23                 | 476.40            | June 19, 2016       |
| 998811           | 24                 | 497.16            | June 19, 2016       |
| 998812           | 24                 | 496.79            | June 19, 2016       |

**Totals 509 10,539.06**

\*Expiry Date as on Government records February 10, 2013





There are no surface rights affecting the Jumbo claims.

### **ACCESSIBILITY, CLIMATE, INFRASTRUCTURE and PHYSIOGRAPHY**

Access to the Kokanee property is via Highway 3a, 40 kilometers east of Nelson and then across Kootenay Lake by a free provincial ferry to the village of Crawford Bay. Ferry schedules are approximately every two hours during the summer season. In the center of the village, a gravel road leads to the southwest and the center of the property. The favorable graphite-bearing lithology exists approximately 2 – 4 km along this road.

Access to the Jumbo property is via Highway 6, 20 kilometers south of Nakusp to the Arrow Lake ferry. This free ferry crosses the Arrow Lakes and is scheduled during the daytime on an on-call basis. From the western side of the Arrow Lakes, an all-weather gravel road leads to the eastern portion of the property. From here, logging roads traverse all areas of the property. Alternative road access is possible east of Vernon along Highway 6, and then north along well-maintained logging roads to the property, or south of Revelstoke along Highway 23 and well-maintained logging roads to the property.

The topography of the both claim areas is best characterized as low-lying rolling hills, classified as the foothills of the rugged Selkirk and Monashee Mountains, elevations often exceeding 2500 meters. On the properties, relief is approximately 450 meters ranging from 530 m (asl) at Kootenay Lake to over 1000 meters (asl) in the central portion of the Kokanee property and 1100 meters ranging from 540 meters (asl) to over 1650 meters (asl) on the Jumbo property. The properties are well forested with primary and secondary stands of fir, hemlock, spruce and cedar typical of the interior rain forests. Ferns, slide alder and devil's club are common undergrowth. Portions of the claims have been logged by clear-cut methods over the past 40 years, and there are signs of active logging being planned on both claim blocks.

Climate is characterized by cool, wet (snow) winters, temperatures ranging 0 – 20 below zero, and warm summers, temperatures ranging 10 – 30 degrees above zero. Annual precipitation is 100 - 125 cm, with snow accumulations of greater than 2 meters in the winter months. Development drilling and mining can be accomplished 12 months of the year, however efficient exploration should be completed only during the period May – November.

Infra-structure, including power, water, and labour are all located within 150 kilometers of each property in the small west Kootenay municipalities and in the cities of Nelson, Trail and Castlegar. The properties are well-facilitated to host all aspects of a medium-sized mining/quarry operation, including adequate areas for plant, waste and tailing disposal, and other mining operations. There are no apparent environmental concerns associated with a graphite quarry and beneficiation operation.

Permits are required to complete the proposed drill programs.



## HISTORY

Kokanee Property: Lead, zinc and silver was recognized in the district dating to the late 1800s. The Bluebell Mine is located 15 km north and was producing Pb/Zn/Ag ore until 1975. The Kokanee Property is located in the similar geological lithologies as Bluebell and has therefore seen exploration since the early 1900s. Recent and documented exploration dates to the 1970s, and is summarized as follows:

**1972 – 1980:** Cominco conducted several phases of ground surveys, including geochemical surveys, geophysical surveys, geological mapping, trenching and 4 diamond drill holes totaling 303 meters, the target being massive sulphides, similar in nature to the Bluebell mine.

**1981 – 1990:** The property lay idle until Bruce Doyle acquired claims in 1991.

**1992 - 1993:** Kokanee Explorations acquired interest in the property, completing ground geophysics (electromagnetic surveys), some geochemistry and 5 diamond drill holes totaling 1,095 meters, the target being massive sulphides.

**1996 – 1999:** Cominco re-acquired interest in the property, completing an extensive airborne geophysical survey and two diamond drill holes totaling 403 meters, again the target being massive sulphides.

**2000 – 2002:** Klondike Gold acquired interest in the property completing some ground geophysics and three diamond drill holes totaling 403 meters, the target being massive sulphides.

In summary, drill programmes were conducted on the property during the following programs:

|                            |                                    |
|----------------------------|------------------------------------|
| 1977, Cominco              | 4 holes, total 303 meters          |
| 1992, Kokanee Explorations | 5 holes, total 1095 meters         |
| 1998, Cominco              | 2 holes, 403 meters                |
| <u>2001, Klondike Gold</u> | <u>3 holes, total 303 meters</u>   |
| <b>Total</b>               | <b>14 holes, total 2104 meters</b> |

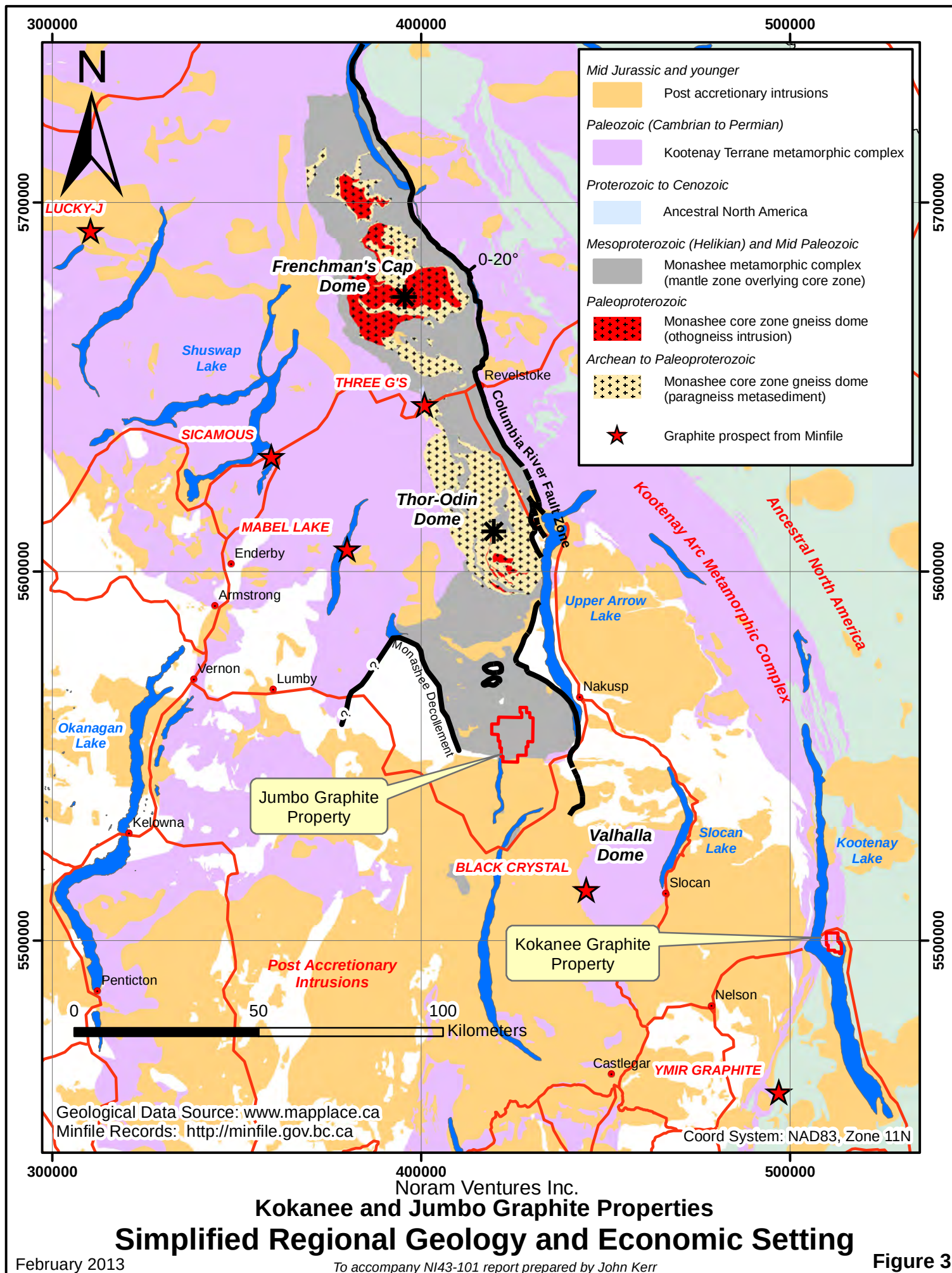
4 holes were drilled north of the graphite zone, 5 holes were drilled south of the graphite zone and 1 hole was drilled east of the graphite zone. The remaining 4 holes were drilled on the EM target, believed all to have penetrated graphite. Abundant reference to graphite is noted in the logs of the four holes. To date, none of the historic drill core has been located.

Selected sampling of all drill cores are reported with no significant intercepts of lead, zinc and silver reported.

There is no recorded history of exploration being directed towards the graphite potential.

Jumbo Property: There is no record of exploration having ever been completed on the property. These may be the first claims ever located on this ground.

Noram completed detailed geological mapping and sampling on the potential graphite horizons on both properties, 6 diamond drill holes, totaling 1376 meters on the Kokanee property and an airborne EM/magnetic survey over the Jumbo property. This reports compiles and summarizes the historical and recent work programs.



## GEOLOGY

### **Regional Setting**

The Kokanee graphite property is located on the east margin of the Kootenay terrane at its contact with rocks of Ancestral North America (Figure 3). Rocks in this part of the Kootenay terrane are referred to as the Kootenay Arc, a 300 (+) km long arcuate exposure of highly deformed and strongly regionally metamorphosed largely Paleozoic strata located between Proterozoic to Paleozoic sedimentary rocks of ancestral North America on the east, and high grade metamorphic rocks of the Monashee complex and Shuswap assemblage on the west (Figure 3).

The Jumbo property is located in the Kootenay terrane, immediately south of the Monashee terrane (Figure 3). Although rocks underlying the property have been assigned to the Monashee metamorphic complex, it appears that the Monashee terrane is limited to an area hosting Archean to Paleoproterozoic-aged gneiss domes.

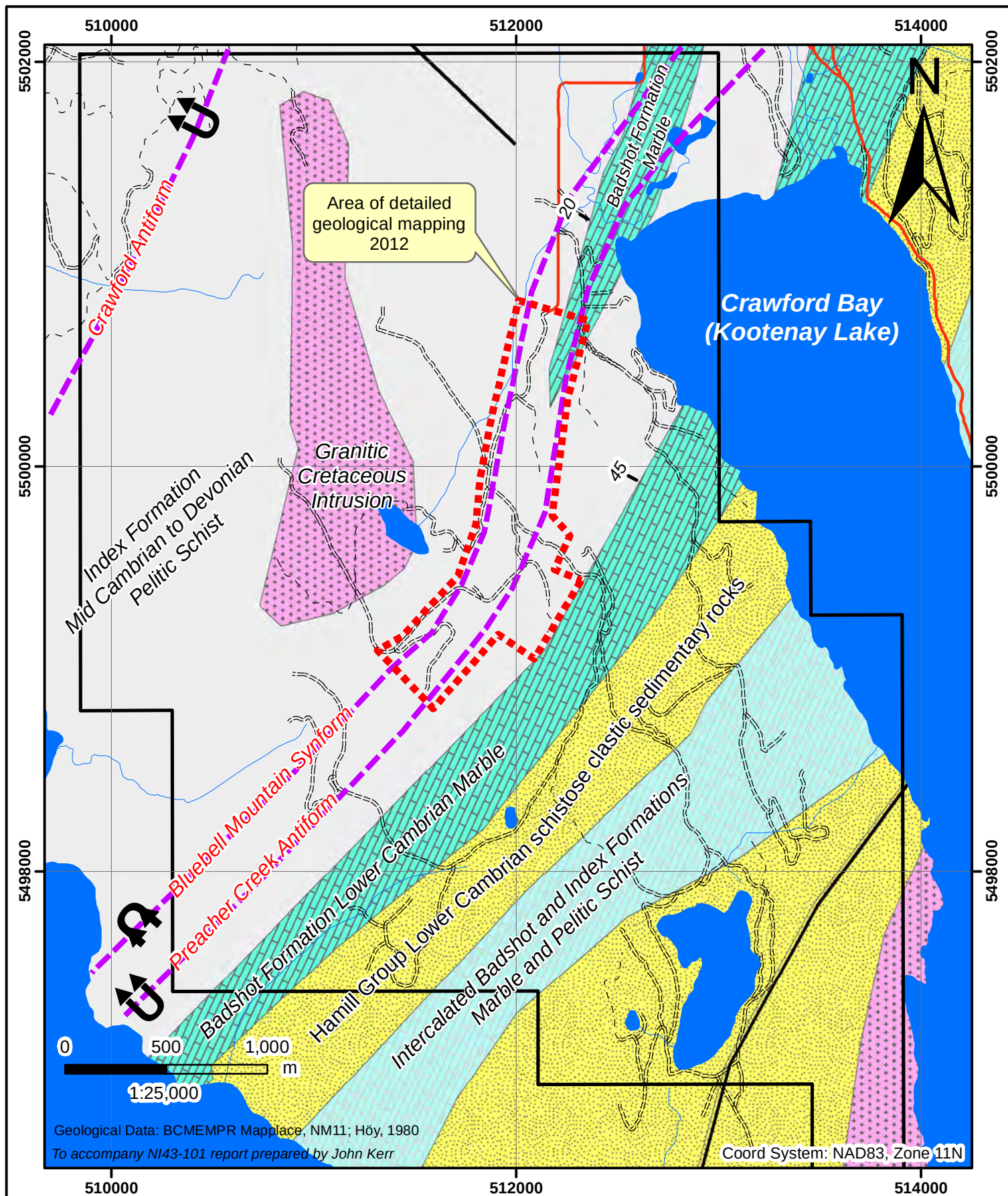
Historically the property area was included in the Shuswap Metamorphic complex, but those rocks have more recently been subdivided into the Shuswap assemblage on the west and the Monashee metamorphic complex on the east. The Monashee complex consists of a core zone of Archean to Paleoproterozoic-aged gneiss domes or nappes, flanked by a mantle of tightly folded Proterozoic and Paleozoic amphibolite facies schistose metasedimentary rocks and orthogneiss intrusions. Regional geology in the Jumbo property area is shown in Figures 3.

### **Property Geology**

Kokanee Property: Geological mapping of the Crawford Bay peninsula appears to correlate well with a southward projection of mapping conducted by in the Riondel area to the north. The property is underlain by a northeast striking and moderately northwest dipping schistose Paleozoic stratigraphic sequence which was subsequently intruded by Cretaceous granitic plugs. The southeast part of the property is underlain by quartzite, schist, meta-siltstone and rare amphibolite of the Lower Cambrian Hamill group. It is basically a meta-epiclastic sedimentary sequence with interbedded mafic tuff units. To the northwest there are multiple or repeated calcareous units designated as Lower Cambrian Badshot formation marble (and possibly Mohican formation) interbedded with the Hamill clastic sediments and pelitic schist of the younger Index formation. The geology of the Kokanee property is presented on Figure 4a (1 and 2).

All rocks are strongly foliated (pelitic and epiclastic rocks are schistose) with relatively consistent strikes and dips. From mapping conducted to the north it appears that three overturned isoclinal structures cross the property (Crawford antiform, Bluebell Mountain synform, and Preacher Creek antiform) and that the geology will be complicated by multiple repeats of the stratigraphic sequence.





Noram Ventures Inc.  
 Kokanee Graphite Property

## Property Geology from BCMEMPR

## Protolith Rock Types

### *Post Accretionary (Jurassic - Cretaceous) Granitic Plutons*

 granite, alkali feldspar granite intrusive rocks

 granodioritic intrusive rocks

### *Permian Kaslo Group*

 basaltic volcanic rocks

### *Carboniferous Milford Group (west side of Kootenay Lake)*

 limestone, slate, siltstone, argillite

### *Paleozoic Lardeau Group*

#### *Index Formation*

 mudstone, siltstone, shale fine clastic sedimentary rocks

#### *Badshot Formation*

 limestone, marble, calcareous sedimentary rocks

#### *Mix of Index, Badshot and Mohican Formations in Crawford Peninsula*

 limestone, slate, siltstone, argillite

### *Lower Cambrian Hamill Group*

 coarse clastic sedimentary rocks

### *Upper Proterozoic Windemere Supergroup*

#### *Horsethief Creek Group*

 quartzite, quartz arenite sedimentary rocks

Legend to accompany Figure 4a1

Noram Ventures Inc.

**Kokanee Property**

## **Regional Geology Lithology Legend for MEMPR Mapping on Maplace (NM11 - Kootenay)**

Detailed mapping was conducted in an area coincident with the HLEM anomalies, a prominent Dighem-indicated conductive zone, the graphite bearing stratigraphic horizon and the area of Noram's 2012 drilling program (Figure 6a). It is generally a 020° to 040° striking and gently to moderately northwest dipping sequence of metamorphosed fine-grained sandstone, mudstone, carbonates, and minor interbedded mafic tuff. These protoliths have been metamorphosed to quartzite, various fine-grained quartz-mica schist assemblages (pelitic schist, some units with garnet), marble and amphibolite. A unit of white marble on the northwest side of the mapped sequence is believed the hanging-wall of the favorable graphite-bearing meta-sediments.

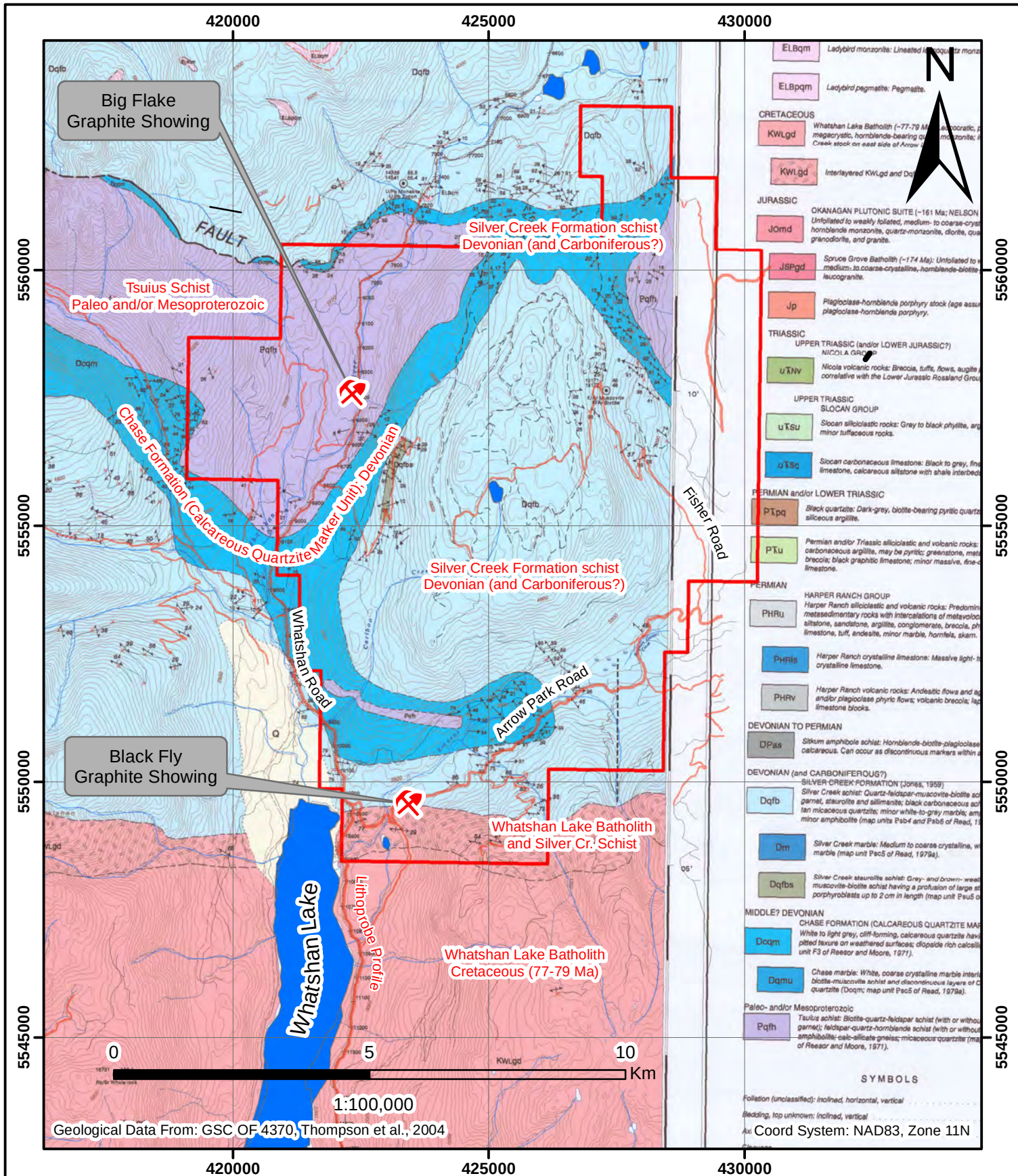
Jumbo Property: Various government-published geological maps for the Jumbo property area have been located and although there are contradictions between maps, the basic geological setting is well-defined. The property is largely underlain by three meta-sedimentary formations; the Paleo and/or Mesoproterozoic Tsuius schist in the northwest and northeast, the Mid Devonian Chase Formation calcareous quartzite marker unit, and the Devonian-Carboniferous Silver Creek Formation quartz-feldspar-muscovite-biotite schist in the central and east parts. A plot of the geology from OF 4370 (Figure 4b1) suggests that the extent of the Chase Formation marker unit is correctly defined. The south part of the property is underlain by the post-accretionary Mid Cretaceous Whatshan Lake batholith.

The purpose for the geological mapping conducted by Noram was to determine if there is a correlation between the conductive zones defined by the TEM survey and graphitic units, and mapping was largely restricted to the anomalous areas. The Chase Formation marker unit is coincident with a zone of low conductivity and hence was not observed during this program. Mapping did include areas nominally underlain by the Tsuius schist and Silver Creek Formations, and this differentiation may need reviewing based on the current observations.

The property is underlain by a meta-sedimentary sequence, probably deposited in a continental margin environment. These rocks have been affected by polyphase deformation and undergone upper amphibolite facies medium to high grade metamorphism, with the development of biotite, garnet and sillimanite ( $\pm$  staurolite).

The sequence is dominated by quartz-rich meta-sandstones. Where these sediments were relatively clean, they formed quartzites. Impure quartzose units, probably with a muddy component, were metamorphosed to fine-grained quartz-biotite  $\pm$  muscovite  $\pm$  garnet schists. Graphite-bearing units occur in a 300-800m thick sequence with lower quartz content. Rocks in this package consist of fine-grained graphitic quartzite, graphitic quartz-biotite schist, marble  $\pm$  graphite, and coarse-grained biotite  $\pm$  muscovite and garnet schist. Protoliths were likely muddy sandstone, limestone, and calcareous mudstone. Some units presumably had a significant organic component which was converted to graphite during metamorphism. Distribution of graphite in the sequence is not ubiquitous, occurring sporadically in units ranging from less than a meter to several tens of meters thick with non-graphitic rock in between.





Noram Ventures Inc.

# Jumbo Graphite Property Property Geology (GSC)

See Figure 4b2 for lithologic legend

Figure to accompany NI43-101 report prepared by John Kerr

Figure 4b1

February, 2013



## CRETACEOUS

**KWLgd**

*Whatshan Lake Batholith (~77-79 Ma): Leucocratic, potassium feldspar, megacrystic, hornblende-bearing quartz monzonite; includes Caribou Creek stock on east side of Arrow Lake.*

**KWLgd**

*Interlayered KWLgd and Dqfb.*

## DEVONIAN TO PERMIAN

**DPas**

*Sitkum amphibole schist: Hornblende-biotite-plagioclase schist, may be calcareous. Can occur as discontinuous markers within and overlying Dqfb.*

## DEVONIAN (and CARBONIFEROUS?)

**SILVER CREEK FORMATION (Jones, 1959)**

**Dqfb**

*Silver Creek schist: Quartz-feldspar-muscovite-biotite schist with or without garnet, staurolite and sillimanite; black carbonaceous schist; dark-grey to tan micaceous quartzite; minor white-to-grey marble; amphibolitic schist; minor amphibolite (map units Psb4 and Psb6 of Read, 1979a).*

**Dm**

*Silver Creek marble: Medium to coarse crystalline, white to dark grey marble (map unit Psc5 of Read, 1979a).*

**Dqfbs**

*Silver Creek staurolite schist: Grey- and brown- weathering muscovite-biotite schist having a profusion of large staurolite porphyroblasts up to 2 cm in length (map unit Psu5 of Read, 1979a).*

## MIDDLE? DEVONIAN

**CHASE FORMATION (CALCAREOUS QUARTZITE MARKER UNIT)**

**Dcqmq**

*White to light grey, cliff-forming, calcareous quartzite having a coarse, pitted texture on weathered surfaces; diopside rich calcsilicate bands (map unit F3 of Reesor and Moore, 1971).*

**Dqmu**

*Chase marble: White, coarse crystalline marble interlayered with biotite-muscovite schist and discontinuous layers of Chase Formation quartzite (Dcqmq; map unit Psc5 of Read, 1979a).*

## Paleo- and/or Mesoproterozoic

**Pqfh**

*Tsuius schist: Biotite-quartz-feldspar schist (with or without sillimanite, garnet); feldspar-quartz-hornblende schist (with or without biotite); amphibolite; calc-silicate gneiss; micaceous quartzite (map units M and F of Reesor and Moore, 1971).*

Legend to accompany Figure 4b1

Noram Ventures Inc.

**Jumbo Graphite Property**

## Lithology Legend (GSC Open File 4370)

Rocks have been folded about east-southeast trending fold axes. A synform in the central part of the property has gently to moderately dipping limbs. Foliation and bedding planes in rocks in the south part of the property are near vertical. As shown in Figure 13, these folds appear to be a later stage deformation of an earlier formed recumbent isoclinal folded sequence.

The schistose meta-sedimentary rocks have been intruded by abundant sills and dykes of fine to medium-grained leucocratic granitic (monzodiorite?) rock, and leucocratic feldspar/quartz/muscovite  $\pm$  biotite  $\pm$  black tourmaline pegmatite. Pegmatites and finer-grained intrusions are intimately associated and obviously related to the same event. Finer grained intrusive rocks generally show a gneissic foliation which parallels foliation in the host schists. All intrusions have a sporadic fine-grained pink garnet content, suggesting that they formed from partial melting of the host schists (anatexis).

### **Mineralization**

**Kokanee Property:** Dark grey fine-grained sporadically graphitic quartzite to quartz-muscovite (+/- biotite) schist occurs in a zone roughly 300m wide with minor intercalated marble and quartz-mica schist. This sequence of units is tentatively located along the axis of the Preacher Creek antiform and if so, is probably substantially thickened by fold repetition. Graphitic members within these schists are of variable grade. Exposure is relatively poor, but where observed, the higher-grade sections typically have widths of a few meters to a few tens of meters. Units with the highest graphite content are generally intensely gossanous and fissile with platy to slab-like cleavage. Graphite content ranges from trace to over 6%. Associated mineralization includes very fine-grained disseminated pyrite, pyrrhotite and minor chalcopyrite. Rocks to the southeast of the graphitic sequence are fine-grained quartz- muscovite ( $\pm$ biotite,  $\pm$ chlorite) pelitic schists. One distinctive unit contains shattered pink garnet up to 5mm in diameter. Two dark green fine-to medium-grained amphibolite units up to 15m thick were also observed. One amphibolite unit was non-magnetic. A second amphibolite contained up to 20% biotite and 5% magnetite, and was strongly magnetic.

Graphite occurs as crystalline flakes up to 2mm in diameter along cleavage planes in the quartz-muscovite schists. Breakage of the rock along cleavage planes provide a spectacular glistening of graphite flakes, giving rise to exaggerated visual estimates of graphite content. Rock-cuts perpendicular to cleavage indicates a very low visual estimate of the graphite content due the very thin graphite flakes.

During the April and June property examinations, the writer collected the following 9 samples from the main graphitic horizon on the Kokanee property:

| Sample No | Easting | Northing | Sample Type  | Length (m) | Graphite % |
|-----------|---------|----------|--------------|------------|------------|
| K-01      | 512204  | 5499430  | Grab/boulder | --         | 2.41       |
| K-02      | 512198  | 5499438  | Chip/outcrop | 3.5        | 1.10       |
| K-03      | 512184  | 5499451  | Chip/outcrop | 1.5        | 0.72       |
| K-04      | 512148  | 5499477  | Chip/outcrop | 0.7        | 1.03       |
| K-05      | 512111  | 5499435  | Chip/outcrop | 4.0        | 3.18       |
| K-06      | 512085  | 5499531  | Chip/outcrop | 4.0        | 1.40       |
| K-07      | 512021  | 5499601  | Chip/outcrop | 1.5        | 2.28       |
| K-10      | 511575  | 5498991  | Grab/Outcrop | --         | 2.60       |
| K-11      | 511670  | 5499147  | Chip/sub o/c | 3.0        | 5.73       |

Other samples collected from the same graphite horizon by Allen in October, 2012 ranged 0.72 – 5.98% graphite. All surface samples (34) collected on the property in 2012 averaged 2.05% graphite. This compares quite well to reported average grades of graphite obtained from drilling (see Mineral Resource and Drill sections)

Jumbo Property: Graphitic rock is generally distinctive and can commonly be identified from a distance in the field. It is typically strongly gossanous with good fissile or slabby cleavage. The most common type of graphitic rock is a fine-grained quartzite or quartz-biotite/muscovite schist with 1-2% very fine-grained disseminated and clotty pyrite and rarely chalcopyrite. Graphite occurs as bright blue-black flakes disseminated throughout and oriented parallel to the foliation plane. Flake sizes generally range from very fine-grained (< 0.1mm) to 4mm. Estimations of percent graphite are very difficult to make since it is only visible when looking across foliation and volumes generally appear much higher than they really are. Graphite is also difficult to differentiate from fine-grained muscovite and biotite in some light.

Although graphite has been identified in all locations of the favorable quartzite and quartz-mica schists, three such areas have been selected as primary targets for future exploration:

- 1) Black Fly Showing: In the southern portion of the property and examined by the writer in June and October, 2012. Sample A-04 collected by the writer at 55499593N; 423558E assayed 5.11% graphite. Other samples collected at the same location by Allen assayed 5.38% graphite and by Dyakowski assayed 6.81% graphite. Samples collected by Allen in the vicinity ranged 1.32 - 3.89% graphite. Most graphite observed are of a coarse flake variet, ranging 0.5 – 2mm in diameter.
- 2) Big Flake Graphite Showing: Examined by the writer in October, 2012. No samples collected. Located in northwest corner of property (5576100N; 422300E) in qtz/mica schist containing large coarse flakes of graphite 2 – 4 mm in diameter. Samples collected by Allen and Doyle in October, 2012 indicate graphite content to range 0.5 – 7.3%.
- 3) South Limb Showing: Not examined by the writer. Located in the central portion of the claims. Samples collected by Allen in October 2012, ranged 1.23 – 3.76% graphite.

Three other showing areas have been identified on the property and were examined and sampled by the writer in June, 2012. Sample A-01 at the Mosquito showing located 5556060N; 429773E assayed 0.86% graphite. Sample A-02 at the north end of the property located 5575906N; 420546E assayed 0.79% graphite. Sample A-03 also at the north end of the property located 5557383N; 429498E assayed 0.95% graphite. None of these showing areas have a graphite content considered of economic interest.

It is interesting to speculate the nature and origin of the large graphite flakes at the “Big Flake” showing. It is assumed that the carbon content in all areas of the property originated from organic carbon when the sediments were deposited. Over a slow metamorphic process (low but steady pressure and temperature), this carbon was remobilized into graphite flakes. Obviously, the flake size would depend somewhat on the porosity of the rock at the time of crystal growth. It is speculated that this porosity would develop in areas of folding, creating the required porosity for large crystals of graphite to grow. These fold hinges may be the most favorable areas to explore for large-flake size graphite.

## **DEPOSIT TYPES**

The principle deposits of interest to Noram are commercial-grade large flake-sized graphite deposits that can be easily mined by quarry methods and beneficiated on site to a commercial product. There is only one deposit of graphite that has had a history of production in British Columbia. This is the Black Crystal deposit of Eagle Graphite Corporation. In recent history (the past 30 years), it has been the only producing graphite mine in North America.

At Black Crystal, the graphitic horizon is between 80 and 100m thick with grades up to 6.95% graphitic carbon. A 43-101 compliant resource calculated in 2002 using surface trench and drill hole sample results indicates a measured and indicated resource of 5,611,000 tonnes @ 1.36% graphite and an inferred: 5,107,000 tonnes @ 1.33% graphite (source - Minfile number-082FNW260, Black Crystal). This deposit is currently preparing to go back into production (on site visit in April, 2012) being operated by Eagle Graphite Ltd. This mine was one of only two operating graphite mines in North America over the past 20 years.

On the Kokanee property there is also potential for conformable massive Pb/Zn/Ag replacement deposits related to the Badshot Limestone and similar in nature to the Bluebell Mine, 15 kilometers to the north. There is no other potential type of economic mineral deposit indicated on the Jumbo property.

## EXPLORATION

### **Pre – 2012 Exploration Programs:**

Kokanee Property: All mineral exploration work was related to discovery of massive Pb/Zn/Ag deposits in the Badshot Limestone, similar in nature to the Bluebell Mine, located 15 kilometers to the north. This work is documented in the **History** section of this report, and the nature and quality of the programs is discussed below:

- 1) The work was well done by a competent exploration teams.
- 2) Drilling of the obvious exploration targets has not been successful in discovering massive sulphide mineralization sufficient enough to constitute an economic deposit.
- 3) This does not mean that such a deposit does not exist on the property, as there has been no viable explanation of the massive sulphide boulders located on the property.
- 4) There has been no specific exploration completed for graphite.
- 5) Historical geophysical surveys, both ground and airborne, have been useful in delineating potential graphite bearing horizons.
- 6) Although historical drilling reference graphite, insufficient detail in logs and lack of drill core renders the drilling as only cursory tools for future exploration and development.

Jumbo Property: There is no pre-2012 exploration program documented on this property.

### **2012 Exploration:**

Kokanee Property: Geological mapping and sampling was considered sufficient to provide drill targets. In September/October 2012, a six-hole drill program totaling 1376 meters was completed to establish grades and thicknesses of graphite mineralization across the full width of the favorable graphite horizon.

The drill program is discussed in much more detail in Drilling, Sample Method and Approach, Sample Preparation, Analyses and Security and Data Verification sections.

Jumbo Property: Noram Ventures Inc. contracted an integrated airborne time domain electromagnetic and magnetic survey of the Jumbo property from SkyTEM Surveys ApS of Denmark. Between September 14th and 22nd, 2012, a total of 634.3 km of 200m-spaced northsouth flight lines were surveyed using an A-Star 350 B2 helicopter. The average flight speed was 56.7 km/hr at a nominal instrument terrain (tree top) clearance of 30m.

High and low moment z coil data were collected from 35 or more time-gates. Low moment (LM) mode has a low current transmission with a high base frequency for better shallow imaging. High moment (HM) mode has high current with low base frequency for late-time data for deep imaging. Measuring voltages at different time gates helps to determine burial depth and size of the conductive feature. Larger targets have larger induced voltages at later time-gates.



Data are also presented in different plotting parameters. Normal distribution (ND) plots appear to have slightly better anomaly definition than the equal area (EA) plots, but the position and form of the anomalies on the two plots are identical. These data were used to calculate resistivity inversions at 30 depth slices ranging from 0 to 500m below surface. Results are summarized on Figures 5a and 5b.

### **2012 Program Results:**

Kokanee Property: From the drilling, it was established that the Kokanee property has the geological potential to host a mineral resource. Drill results are discussed in much more detail in the Drilling and Mineral Resource Estimates sections of this report.

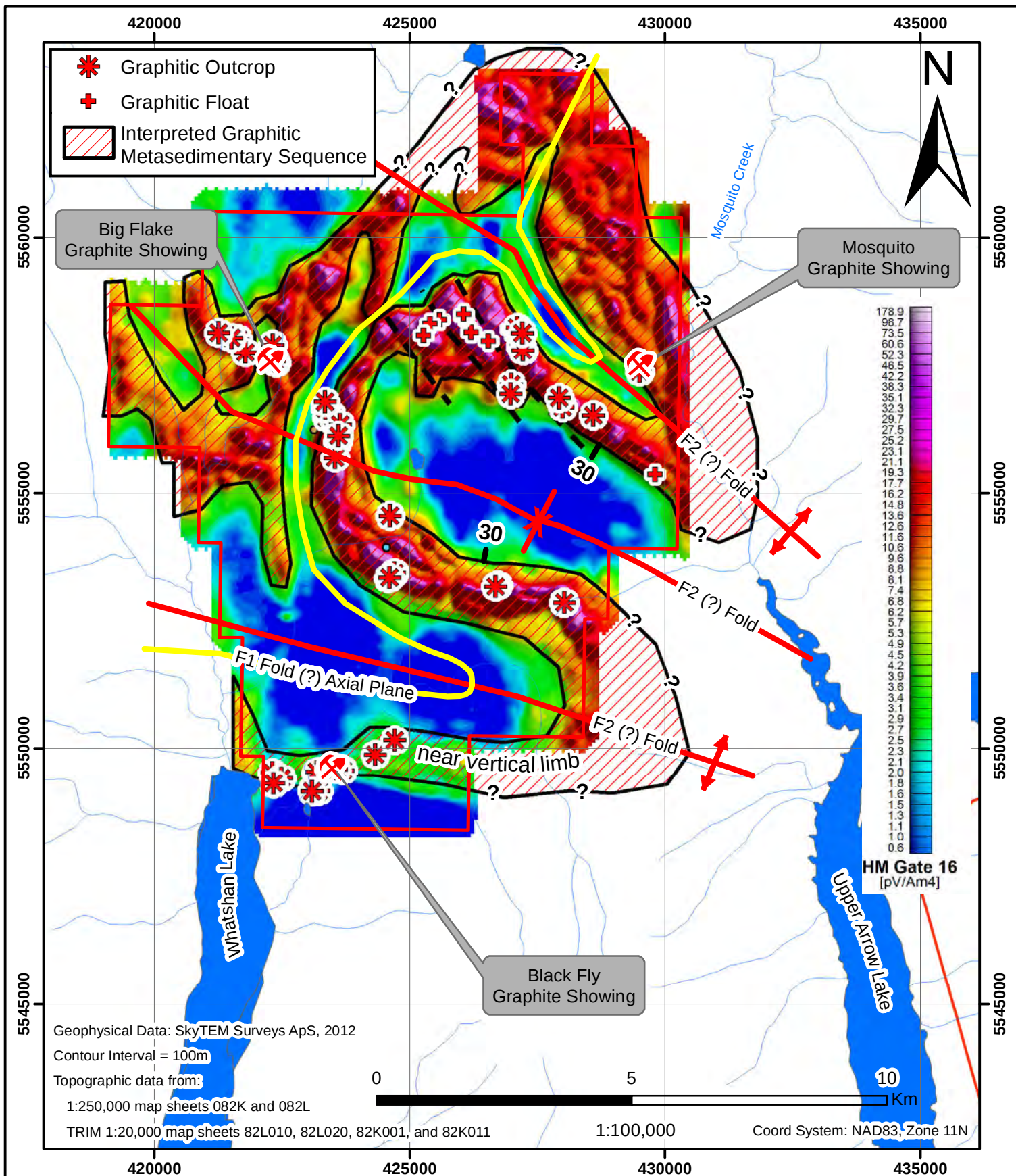
Jumbo Property: All the various plots of EM data using different survey and plotting parameters show very similar patterns. A sinuous conductive feature from a few hundred meters to 2km wide appears to be outlining a tightly folded sedimentary horizon.

Higher time-gate data is apparently measuring relatively deep features. In this case some of the anomalies become more diffuse with depth, suggesting a nearer surface conductive source. There is also a slight horizontal shift of the anomaly location with depth, probably due to dipping conductive strata. The prominent west-northwest verging horseshoe-shaped anomaly in the east-central part of the property appears to be closing slightly at depth, which is consistent with observed dips in a mapped synform. This shift, however, is very slight. Considering the gentle dips observed on surface, one would expect a more dramatic shift with depth.

Except in the southern area of the property (Black Fly showing area), resulting anomalies from the airborne TEM survey have a direct correlation to the graphite bearing schists and quartzite (see Figures 5a and 5b). Interpretation also gives a reasonably reliable interpretation of strike and dip of the favorable sedimentary horizons. The Black Fly area has been mapped as an area of steep-vertical dips, which may rationalize the weak TEM anomalies in this area.

Plots of total magnetic intensity and residual magnetic field show very little geological correlation to graphite units. An east-west zone of low magnetic susceptibility dominates the south part of the property. Susceptibility increases gradationally to the north, with a general east-southeast fabric. This is similar in orientation to schistosity developed in the area, but it does not appear to be mapping distinct lithologies which are complexly folded.

The magnetic plots do not appear to be helpful in understanding underlying geological features, therefore magnetic maps are not provided with this report.



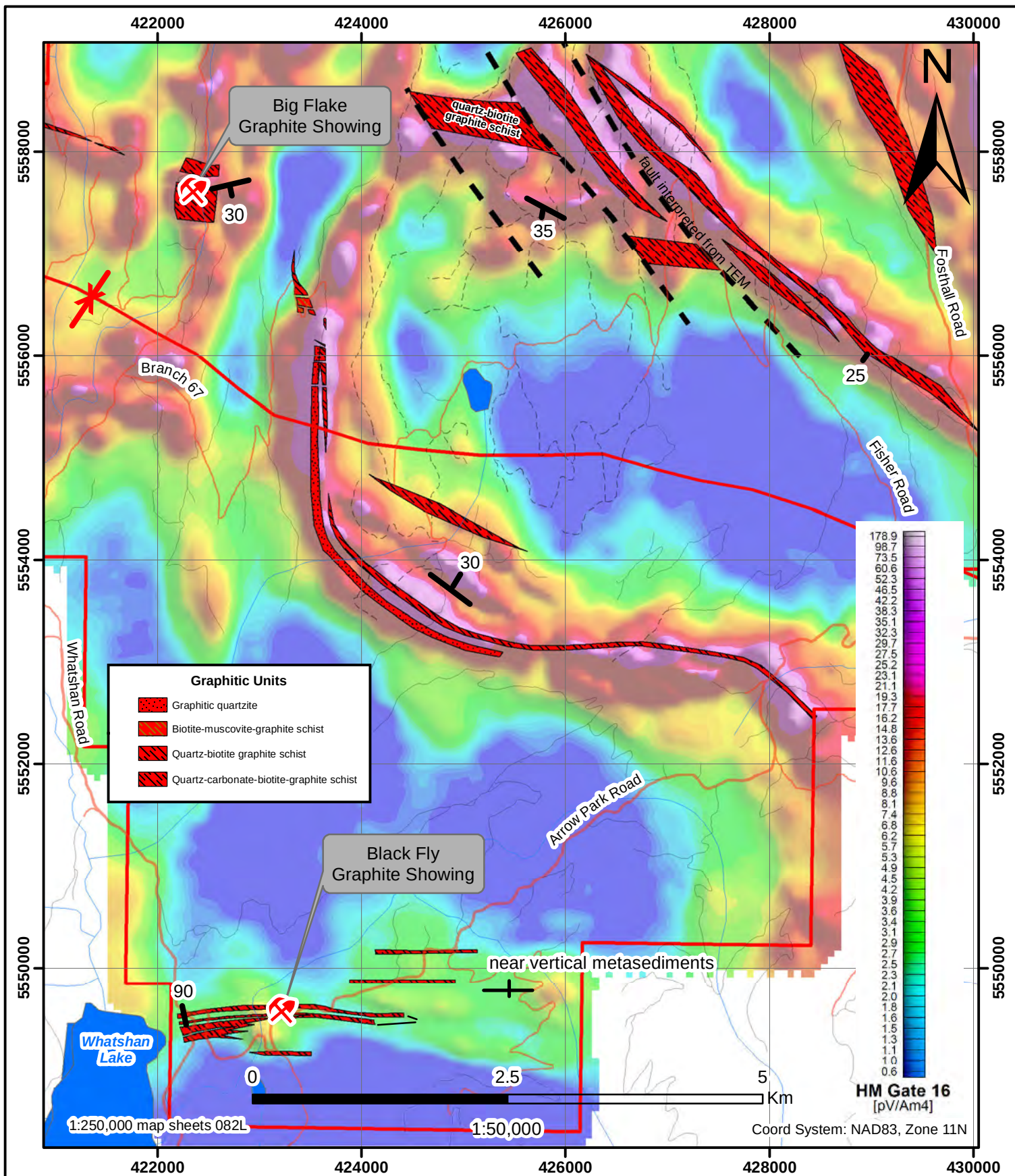
Noram Ventures Inc.  
**Jumbo Graphite Property**  
**Structural Interpretation of the TEM (HM Z G16\_EA1) Plot with Graphite Occurrences**

February, 2013

Figure to accompany NI43-101 report prepared by John Kerr

**Figure 5a**





Noram Ventures Inc.  
Jumbo Graphite Property

## Graphitic Units and TEM (HM\_Z Gate 16)

## DRILLING

Kokanee Property: Prior to 2012, four drill campaigns are documented in assessment reports. In summary, these drill programs were conducted on the property during the following periods:

|                            |                                    |
|----------------------------|------------------------------------|
| 1977, Cominco              | 4 holes, total 303 meters          |
| 1992, Kokanee Explorations | 5 holes, total 1095 meters         |
| 1998, Cominco              | 2 holes, 403 meters                |
| 2001, Klondike Gold        | 3 holes, total 303 meters          |
| <b>Total</b>               | <b>14 holes, total 2104 meters</b> |

All programs were targeting massive sulphide deposits, and are of little use in development of a graphite resource. The drill core is not available for analysis, and only 4 of the 14 holes were drilled in the vicinity of the main graphite bearing horizon. The holes reference graphite contents, however can never be used for graphite resource estimates.

Six NQ diamond drill holes were completed by Noram during September/October, 2012. A summary of the hole data is as follows:

| Hole No      | Easting | Northing | Elevation (m) | Azimuth | Dip | Length         |
|--------------|---------|----------|---------------|---------|-----|----------------|
| KD12-001     | 511534  | 5499156  | 797           | 135     | -50 | 254.6          |
| KD12-002     | 511534  | 5499156  | 797           | 090     | -50 | 245.4          |
| KD12-003     | 511795  | 5499402  | 836           | 085     | -50 | 214.9          |
| KD12-004     | 511870  | 5499905  | 749           | 090     | -50 | 235.1          |
| KD12-005     | 511871  | 5500003  | 737           | 070     | -50 | 223.5          |
| KD12-006     | 511836  | 5500049  | 746           | 090     | -50 | 49.4           |
| KD12-006a    | 511836  | 5500049  | 746           | 090     | -50 | 152.7          |
| <b>Total</b> |         |          |               |         |     | <b>1,375.6</b> |

Hole KD12-006 had to be abandoned at a depth of 49.4m. Hole KD12-006a was a re-drill of the same hole to 152.7 meters, 70 meters short of the target depth. Down-hole measurements were taken at the bottom of each hole, except KD12-006 and 006a. There was minimal deflection of the bearing of each hole (<less than 2 degrees), and general flattening of each hole to 42 - 49 degrees.

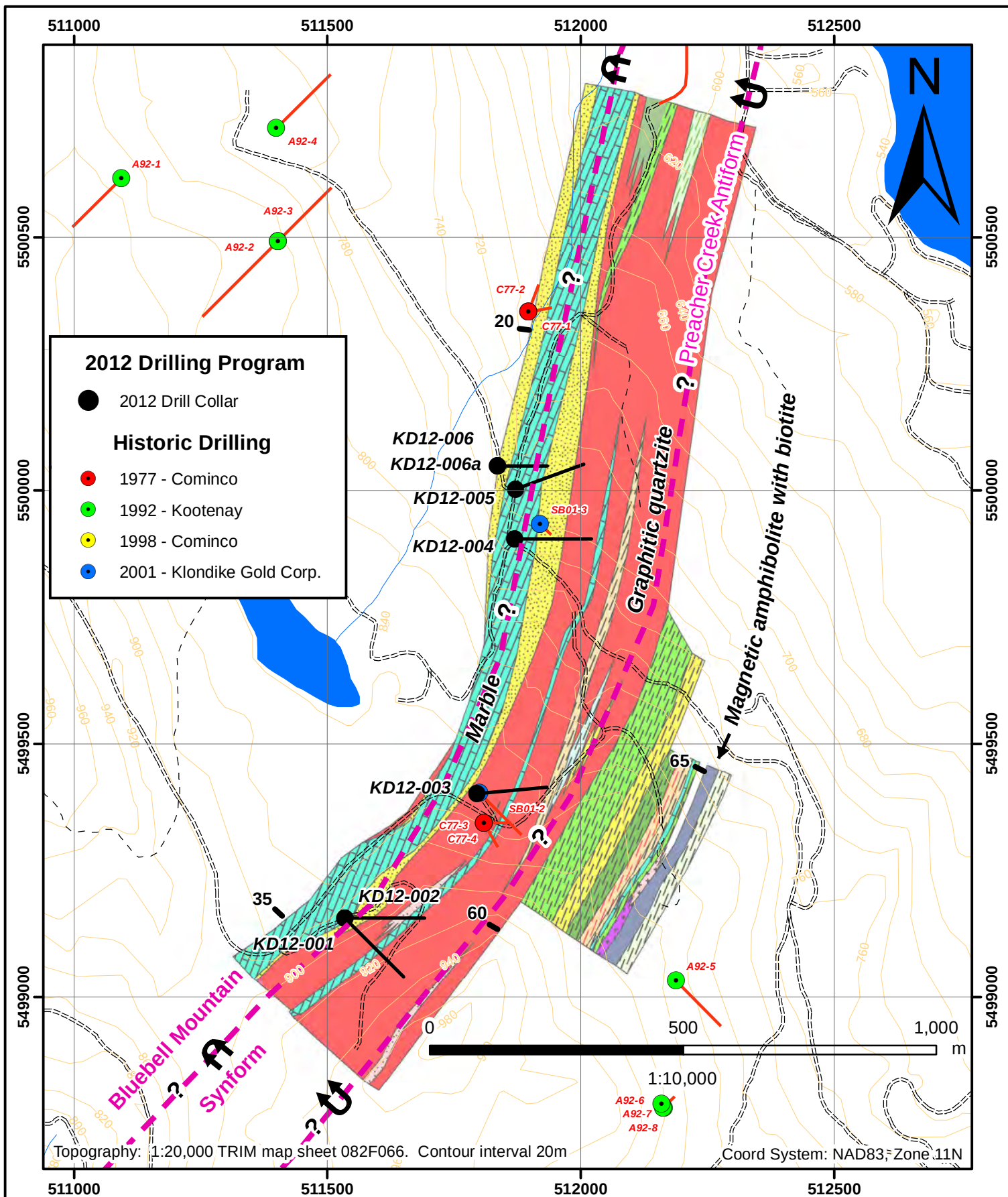
The drill core was geologically logged on site by on-site geologist, Mr. Stephen Butrenchuk, P. Geo., detailing the encountered rock-types and identifying any alteration, sulphide and graphite mineralization. He also laid out samples using 3 meter and/or geological contacts to control sample intervals. The drill logging and raw assay data are preserved in an assessment report compiled and authored by Gordon J. Allen, P. Geo. Only sections containing visible flake graphite were sampled. A total of 423 samples were collected and shipped for assay. Sample methods, analysis and data verification are discussed in other sections of this report.

Sections of each hole are presented on Figures 7a to 7f (inclusive). Included on each section is the detailed geology, a bar graph of assay results, the orientation and dip of each hole, with appropriate correction for down-hole flattening. Also shown on the sections are the composited averages at a selected cut-off of 1.0% graphite content.

These composited intervals were then projected up-dip to surface and the boundaries of the 1.0% cut-off are shown on surface plan, Figure 8a.

Jumbo Property: There is no recorded reference of historical or recent drilling having been completed on the Jumbo property.





Noram Ventures Inc.  
Kokanee Graphite Property

## Drill Hole Locations and Property Geology (Noram Mapping)

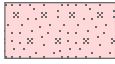
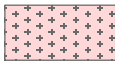
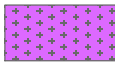
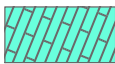
See Figure 6b for lithology legend

Figure to accompany NI43-101 report prepared by John Kerr

February, 2013

Figure 6a

## Lithology Legend

|                                                                                     |                                                          |
|-------------------------------------------------------------------------------------|----------------------------------------------------------|
|    | Leucocratic granitic (quartz monzonite?) sills and dykes |
|    | Leucocratic pegmatite sills and dykes                    |
|    | Gabbro                                                   |
|    | Marble                                                   |
|    | Quartzite                                                |
|    | Quartzite with graphite                                  |
|    | Amphibolite schist                                       |
|    | Amphibolite schist with biotite and magnetite            |
|   | Muscovite-chlorite schist                                |
|  | Quartz-biotite-muscovite schist                          |
|  | Quartz-muscovite schist                                  |
|  | Quartz-muscovite-biotite schist                          |
|  | Calcareous quartz-muscovite-biotite schist               |
|  | Quartz-muscovite-biotite-chlorite schist                 |
|  | Quartz-muscovite-biotite-garnet schist                   |
|  | Quartz-muscovite-chlorite schist                         |

Noram Ventures Inc.  
**Kokanee Graphite Property**  
**Geology Legend (Noram Mapping)**

*Legend for Figure 6a*

## **SAMPLE METHOD and APPROACH**

As historical drilling and sampling programs were targeting massive sulphides, which has minimal impact on the potential graphite resource, details of the sampling are not discussed in this report.

Eleven samples were collected by the writer and twenty-five by Gordon J. Allen, P. Geo and identified for use in this report. The samples were collected to provide characteristic composition of mineralized rock as well as to express an order-of-magnitude values mineral content present. As rocks were selected and random chip samples, there is no need to elaborate further on the sampling methods.

The approach to sampling the drill core was to combine the requirements of exploration drilling with definition drilling. Appropriate measures were implemented into the program, discussed in Data Verification section, however limited to the fact that the drill program was considered a primary exploration program for graphite.

Details regarding sample preparation are discussed in detail in the Sample Preparation and Security section below. In summary, the core was logged onsite, then shipped to the Vine Property core storage facility in Cranbrooke, where it was sampled and shipped to the laboratory. The remaining half of the core was placed back in the core boxes and is being permanently stored at the Vine Property storage facility.

## **SAMPLE PREPARATION, ANALYSIS and SECURITY**

NQ drill samples were selected based on visual graphite content, laid out to be sampled at approximately 3 meter intervals (or geologic contacts) by the on-site field geologist. Sample lengths ranged 0.2 – 3.66 meters, averaging 2.6 meters in length. The drill core was shipped to the Vine Property Core Storage facility in Cranbrooke where the core was split by a hand core-splitter. Half the core was placed in plastic sample bags, appropriately identified by sample number and shipped hole-by-hole to the laboratories of Acme Analytical Laboratories Ltd. (Acme) in Vancouver by freight. The chain of custody of handling samples was monitored by the writer and considered in no danger of being mishandled. The sample splitting facility in Cranbrooke and work-in-progress was examined by the writer, and found the facility and sampling to be very clean, uncontaminated, and of no concern to sample integrity.

The core samples were received at Acme, and then distributed to the metallurgical department for initial sample preparation. Each sample was crushed to -10 mesh (coarser than normal), and was done so to provide sufficient particle size to have metallurgical testing completed on selected samples. A 250 gram aliquot was crushed to standard size and then pulverized to -200 mesh and mixed for assay. A 0.1gm aliquot was ignited to 600 degrees C to burn organic carbon, and then dissolved in an HCL leach to drive off carbon in carbonate rocks. The residue was then assayed for carbon by standard Leco methods to determine the graphite content.

Surface samples were delivered to Acme for similar graphite assays. In addition, selected surface samples by MS-ICP multi-element analysis.

## DATA VERIFICATION

On receipt of all initial assays from the drill program were received from Acme, 18 samples of these rejects were selected from all holes and sent to the laboratories of AGAT Laboratories Ltd. in Vancouver for comparison and verification of the original assay. This represents one sample selected every 20<sup>th</sup> sample in zones of mineralization. Analytical techniques used by AGAT are similar to Acme.

The average of the original 18 samples assayed at Acme was 1.63% graphite and the average of the same 18 samples assayed at AGAT was 1.60% graphite, representing a variance of less than 2%. The single largest sample difference was 2.06% graphite at Acme vs 1.57% graphite at AGAT, a variance of 25%. These variances are very acceptable, as is the variance of individual samples, and provide no concern to the writer to use the original assays for resource estimates.

During the drill program, there was no allowance made to insert any standards and blanks into the drill core samples. On receipt of the samples in Vancouver, the writer interviewed Mr. Clarence Leong, chief assayer at Acme, to investigate the lab's methods of standards and blanks being inserted into the sample sequences to provide quality assurance and control (QA/QC). Mr. Leong satisfied me that the standard and blank samples used by Acme are of high quality, appropriately tested and used by Acme for their own QA/QC, at a similar frequency accepted by industry standards (every 30<sup>th</sup> sample). In light of the fact that standard and blank samples for graphite are not common in the industry, it was decided that I could rely on these samples for data verification, rather than attempt to locate standard and blank samples that could not be verified. In future programs, Noram is advised to prepare standards and blanks from samples of their own collected from this drill campaign.

The writer has reviewed the results of standards and blanks as reported on assay sheets and the duplicate samples above, and has not found any significant concern regarding the assay data used for potential resource estimates and compilation expressed in this report.

There is no historical drill data being used for resource estimates in this report.

The airborne geophysical program flown on the Jumbo property by SkyTEM Surveys ApS, Toftedet 18, 8330 Beder, Denmark. Although the writer has not spoken with SkyTEM regarding this survey, I have interviewed them several times in history regarding the quality of their data. I am satisfied that the quality of this data is good and need no further verification

### **ADJACENT PROPERTIES**

There is no major claim blocks adjacent to either property. Several small, minor holdings adjoin both properties, however are believed to be beneficially owned by individual Free Miners, who are doing little to develop their interest. The two small blocks adjoining the Jumbo property are likely due to the presence of graphite.

### **METALLURGICAL TESTING**

Some preliminary metallurgical test-work has been completed on both surface samples from Kokanee and Jumbo properties and from the recent drill core on the Kokanee property. These tests were completed to determine the flake-size of all graphite present in the various graphite-bearing horizons. The work was done by Acme Metallurgical Ltd, a division of Acme Analytical (23 samples), and AGAT Laboratories (3 samples).

Based on the initial results of 26 “flake-size” determinations, it was realized the methodology of both laboratories was not yielding definitive results that would assist in determining flake size, quality and value of the graphite. The main problem was the lab’s inability to yield and guarantee 100% liberation of graphite particles from gangue rock. Work was therefore discontinued as the results are considered of no value.

Recommendations for ongoing work include tests be conducted on samples from both properties at the laboratories of SGS Canada Ltd. of Lakefield, Ontario to determine “flake” size and other qualities of the graphite. It is understood that a 10kg sample from the Jumbo property has been shipped by Noram to the laboratory for initial tests. Results are anticipated in 4 – 5 weeks.

### **OTHER RELEVANT DATA and INFORMATION**

There is no other relevant information pertaining to the property that the writer is aware of.



## MINERAL RESOURCE ESTIMATES

Kokanee Property: There are no documented reports of known mineral resource on this property, base metal or graphite. A mineral resource has not been confirmed by sampling or drill testing.

The 2012 drill program was the first exploration drill program that has been initiated for a graphite resource. All six holes encountered a substantial intersection of graphite, which enabled the writer to classify each intersection at three various cut-offs: 0.5% graphite; 1.0% graphite; and 1.5% graphite. Selecting the cut-off that appropriately defines a resource is somewhat limited due the unknown value of graphite.

The cut-off selected is 1.0% graphite, as this approximate value of 10kg/tonne, or \$15 – 17/tonne would represent the general operating cost of a mid-size mining operation. Tonnage and grade potential is therefore shown for all three cut-offs, however a cut-off of 1.0% cut-off is suggested to discuss potential resource of this graphite bearing zone. At the three cut-off levels selected, the true width and graphite content of each hole intersection is shown below:

| Drill Hole<br>(depth m) | Cut-off %gr | From (m) | To (m) | Length (m) | True Width (m) | % graphite |
|-------------------------|-------------|----------|--------|------------|----------------|------------|
| KD12-001                | 0.5         | 53.7     | 190.9  | 137.2      | 137.2          | 1.26       |
| (254.6)                 | 1.0         | 78.0     | 148.2  | 70.2       | 70.2           | 1.53       |
|                         | 1.5         | 56.7     | 66.8   | 8.1        | 8.1            | 2.36       |
|                         | (and)       | 84.1     | 111.6  | 27.5       | 27.5           | 1.75       |
| KD12-002                | 0.5         | 53.4     | 190.5  | 137.2      | 112.0          | 1.22       |
| (245.2)                 | 1.0         | 88.4     | 154.0  | 65.6       | 53.5           | 1.61       |
|                         | 1.5         | 99.1     | 126.5  | 27.5       | 22.4           | 1.80       |
|                         | (and)       | 141.8    | 154.0  | 12.2       | 10.0           | 2.13       |
| KD12-003                | 0.5         | 27.8     | 190.5  | 120.4      | 96.3           | 1.15       |
| (214.9)                 | 1.0         | 22.9     | 40.1   | 17.2       | 13.7           | 1.52       |
|                         | (and)       | 52.1     | 85.0   | 32.9       | 26.3           | 1.85       |
|                         | 1.5         | 25.9     | 35.1   | 9.2        | 7.4            | 1.72       |
|                         | (and)       | 59.5     | 85.0   | 25.5       | 20.4           | 1.96       |
| KD12-004                | 0.5         | 84.1     | 221.3  | 137.2      | 121.8          | 1.27       |
| (235.1)                 | and         | 32.3     | 65.9   | 33.6       | 29.8           | 0.97       |
|                         | 1.0         | 96.3     | 145.1  | 48.8       | 43.3           | 2.02       |
|                         | (and)       | 175.6    | 206.1  | 30.5       | 27.1           | 1.16       |
|                         | 1.5         | 96.3     | 142.1  | 45.8       | 40.4           | 2.08       |
| KD12-005                | 0.5         | 83.8     | 223.3  | 139.7      | 118.6          | 1.16       |
| (223.5)                 | 1.0         | 105.2    | 169.2  | 64.0       | 54.3           | 1.77       |
|                         | (and)       | 199.7    | 221.0  | 21.3       | 18.1           | 1.22       |
|                         | 1.5         | 105.2    | 117.4  | 12.2       | 10.4           | 2.07       |
|                         | (and)       | 135.7    | 169.2  | 33.5       | 28.5           | 1.87       |
| KD12-006a               | 0.5         | 86.9     | 152.7  | 65.8       | 60.1           | 1.10       |
| (152.7)                 | 1.0         | 129.6    | 152.7  | 23.1       | 20.8           | 1.75       |
|                         | 1.5         | 129.6    | 138.7  | 9.1        | 8.2            | 2.01       |
|                         | (and)       | 144.8    | 152.7  | 7.7        | 6.9            | 1.90       |

Based on this table of composited intercepts, weighted average true thicknesses and grade at each cut-off are therefore estimated as follows:

| Cut-off<br>% graphite | Avg True<br>thickness | Avg %<br>graphite |
|-----------------------|-----------------------|-------------------|
| 0.5                   | 97.3 meters           | 1.25              |
| 1.0                   | 47.1 meters           | 1.72              |
| 1.5                   | 31.8 meters           | 1.95              |

Drill testing established the down-dip depth of mineralization to be 100 meters (DDH12-003) to 150 meters (DDH12-001). The strike length of the graphite horizon tested is 1200 meters. Potential tonnage and grade ranges within the area drilled are stated below, (SG = 2.5):

Cut-off of 0.5% graphite: 29MT to 44MT @ grades ranging 1.2 – 1.3% graphite

**Cut-off of 1.0% graphite: 15MT to 22.5MT @ grades ranging 1.65 – 1.80% graphite\***

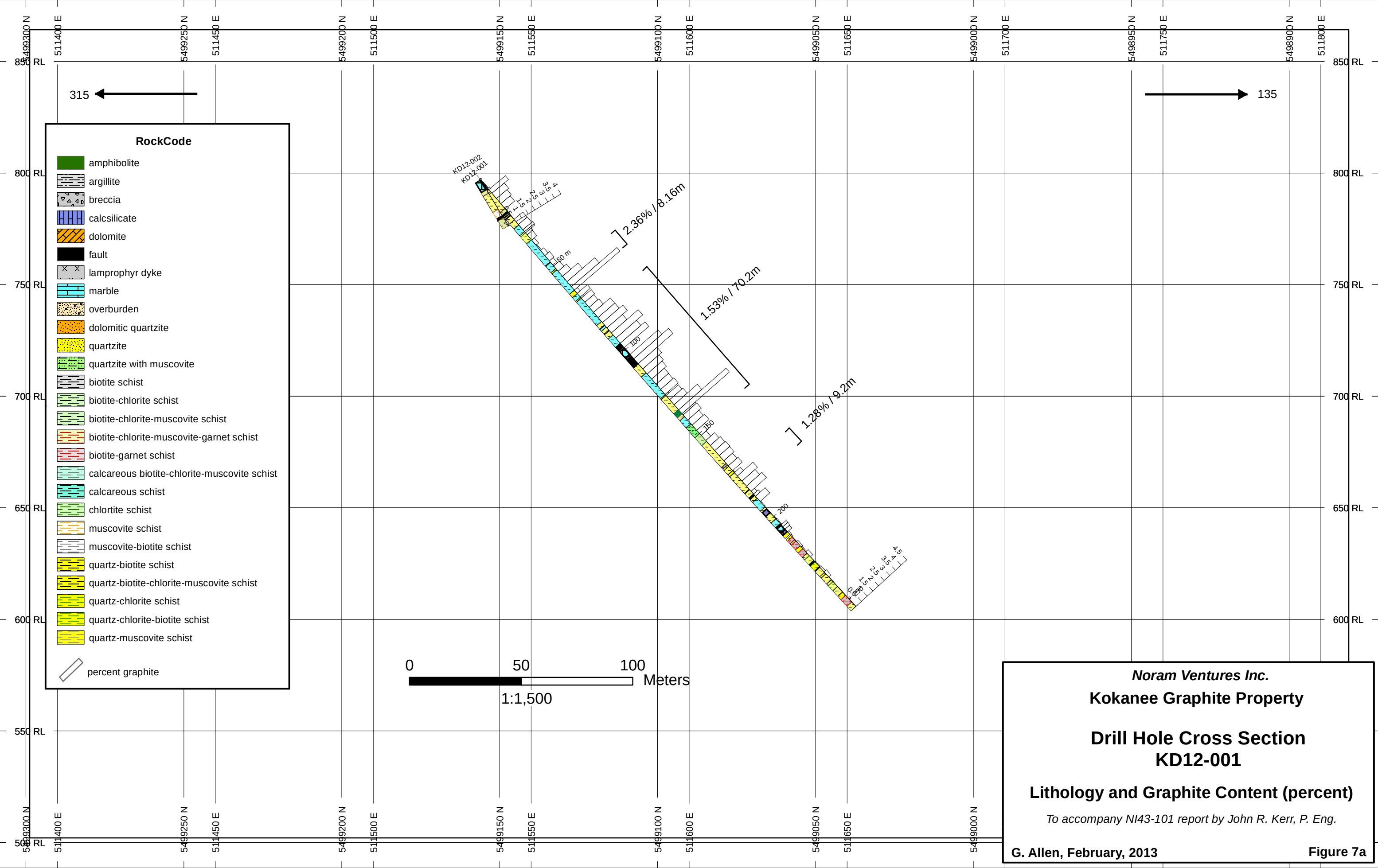
Cut-off of 1.5% graphite: 10MT to 15MT @ grades ranging 1.85 – 2.05% graphite

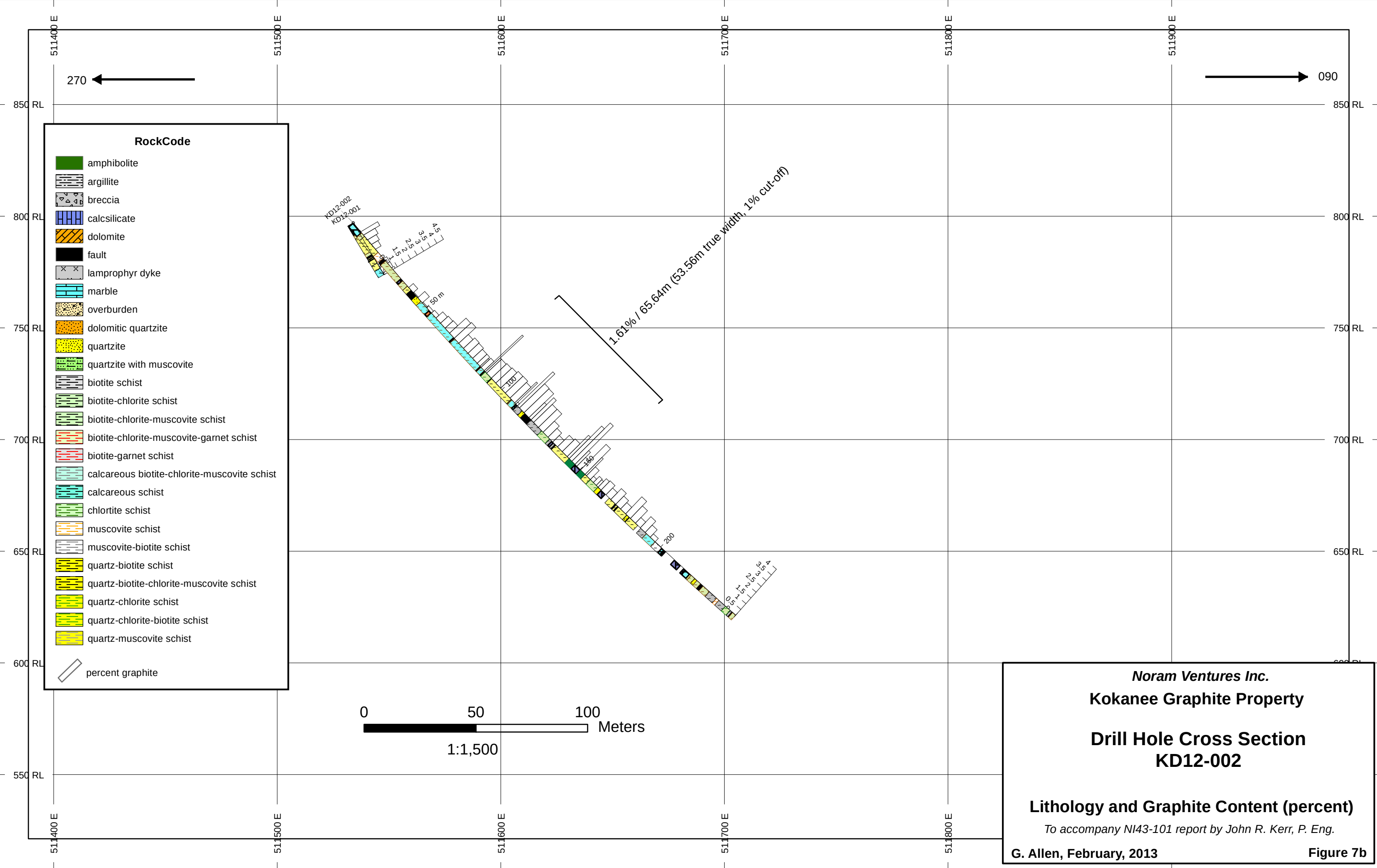
\*Cut-off of 1% graphite is selected as the cut-off to use for tonnage and grade estimates at current value of graphite. The potential tonnage and grade is conceptual in nature, that there has been insufficient exploration to define a mineral resource and that it is uncertain if further exploration will result in the target being delineated as a mineral resource.

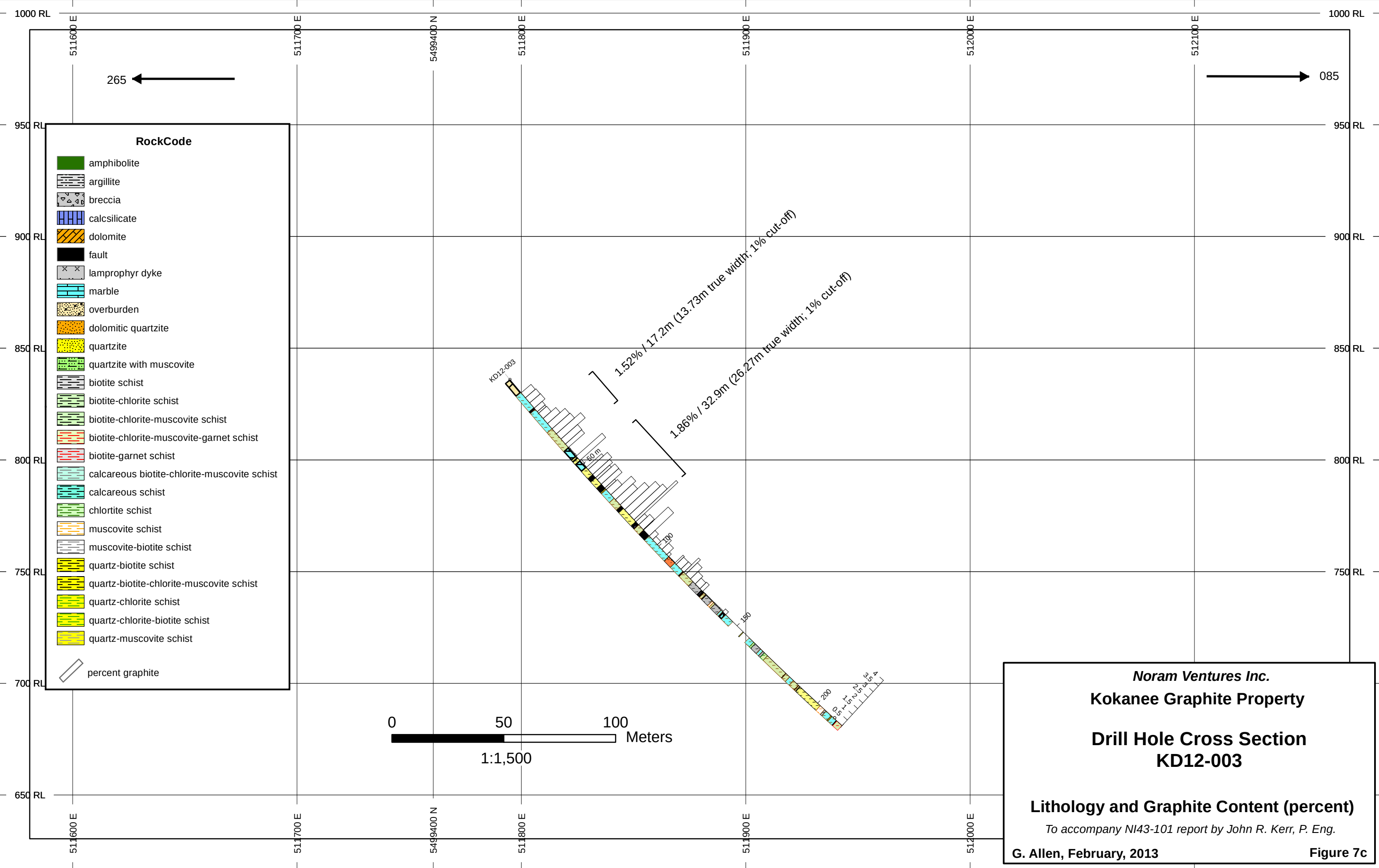
There is added potential for additional resource along strike 500 meters to the north and a minimum of 300 meters to the southwest, as well as down-dip. Eight additional drill holes are recommended (see Figure 8a) to classify this as a resource to NI43-101 compliancy, and are included in the Recommendations section.

At a cut-off of 1.0% graphite, the Kokanee property has a potential tonnage and grade of 15,000,000 – 22,500,000 tonnes at grades ranging 1.65 – 1.80% graphite.

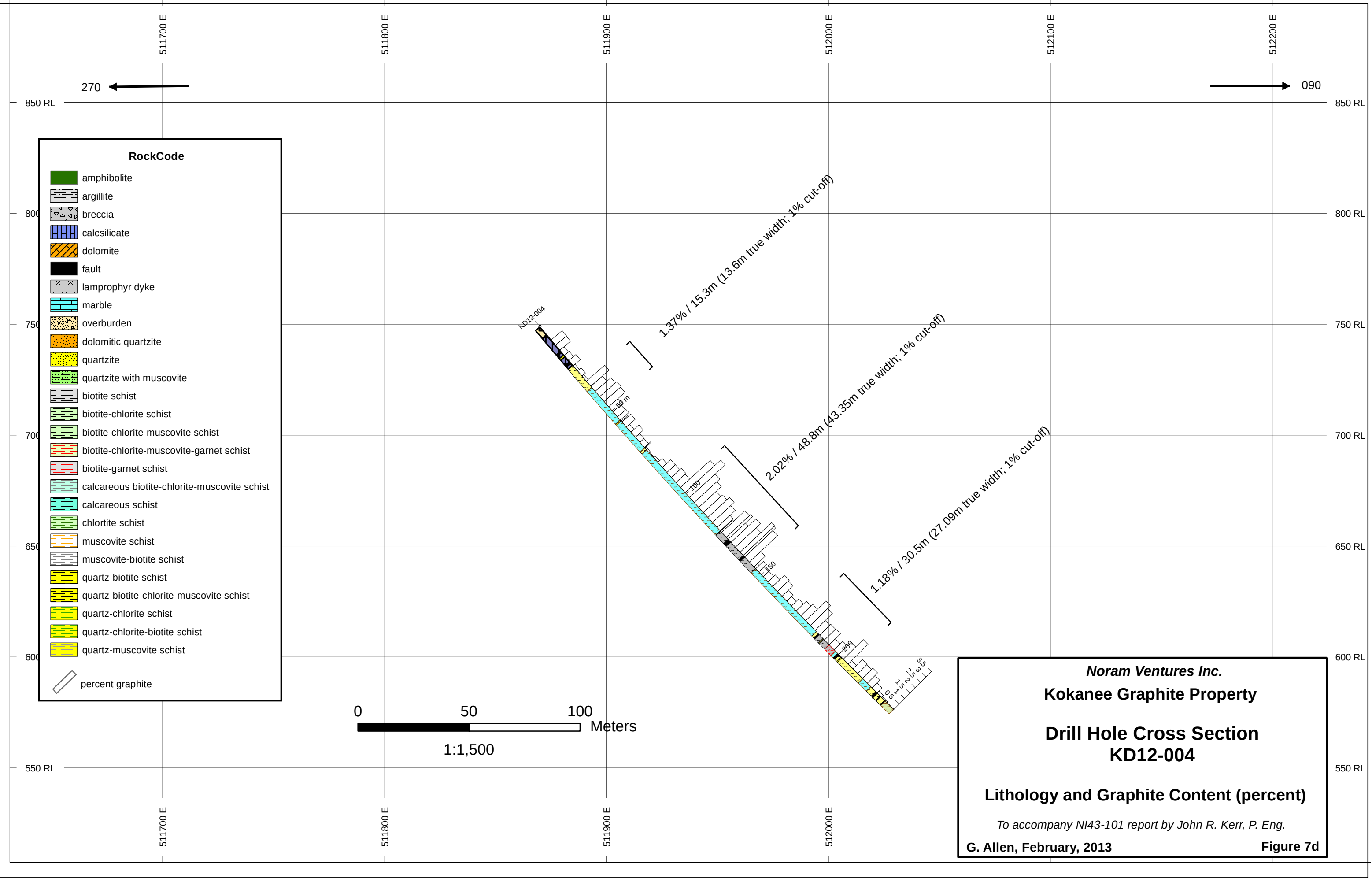
Jumbo Property: There is insufficient data available on the Jumbo property to quantify resource potential, however 16 drill-hole targets have been selected for exploration drilling. These are being recommended as a two-phase program, with 7 holes totaling 2100 meters in the initial phase (see Figure 8b, and Recommendations section).

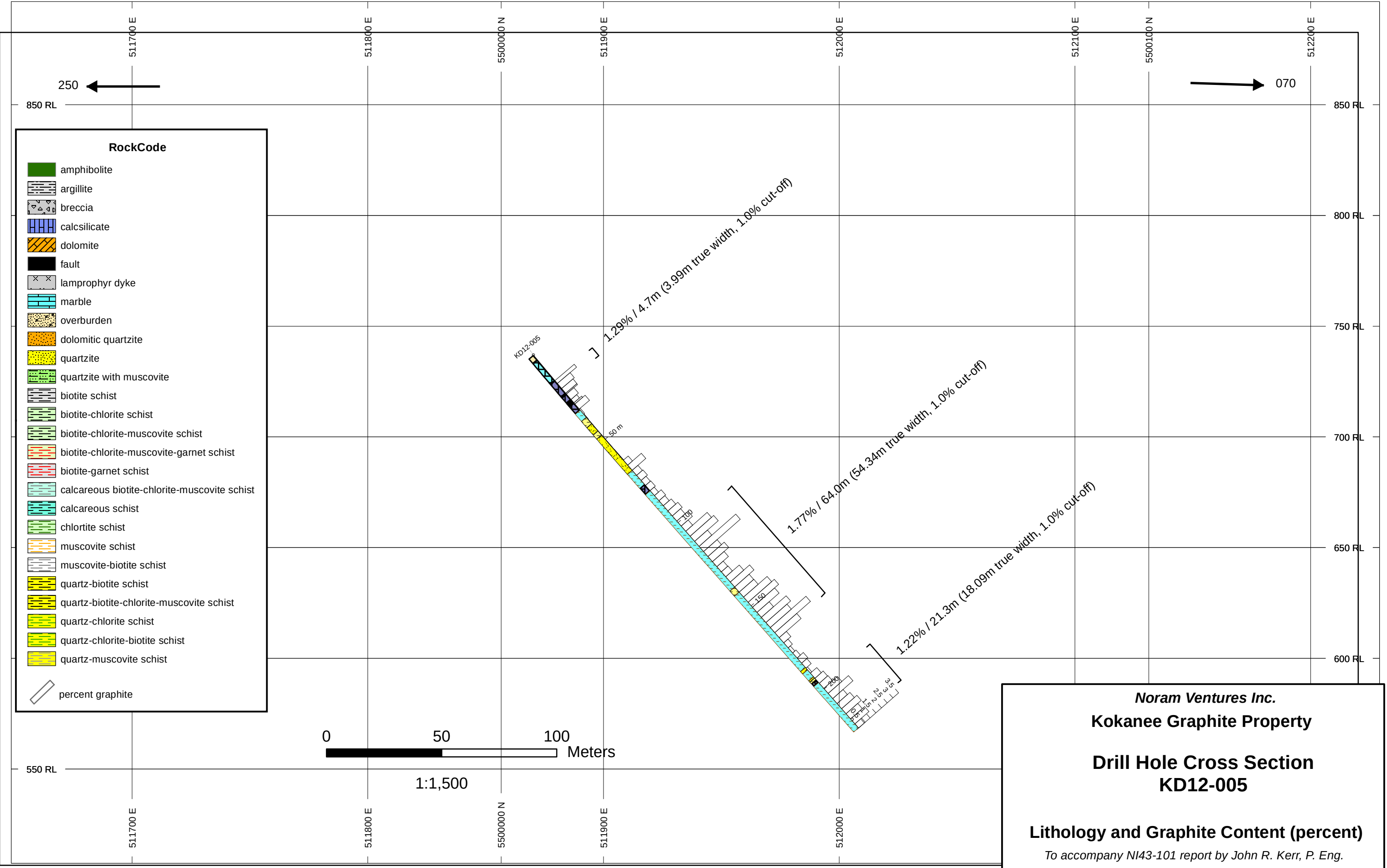




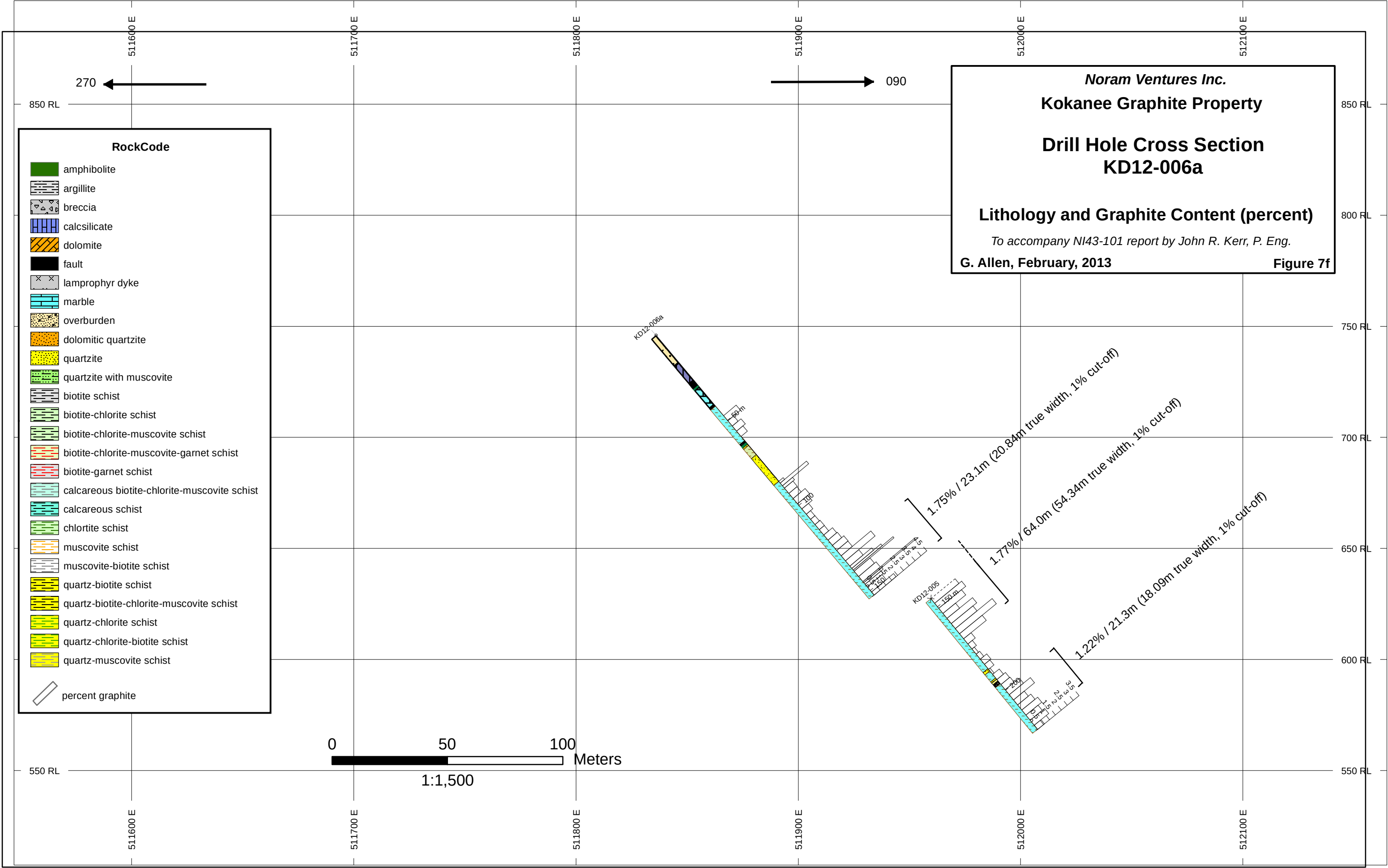


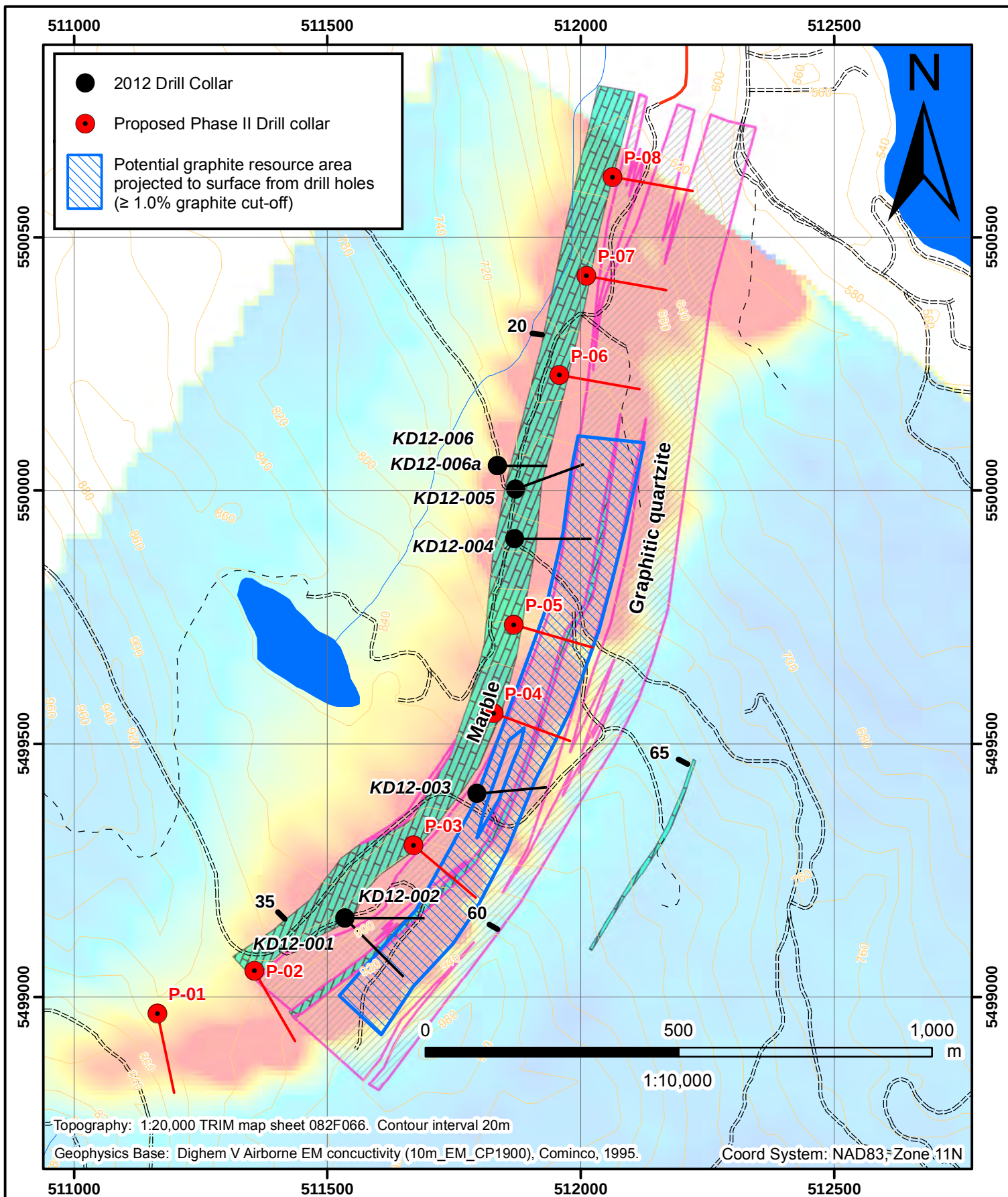






**Noram Ventures Inc.**  
**Kokanee Graphite Property**  
**Drill Hole Cross Section**  
**KD12-005**  
**Lithology and Graphite Content (percent)**  
*To accompany NI43-101 report by John R. Kerr, P. Eng.*  
**G. Allen, February, 2013** **Figure 7e**





Noram Ventures Inc.  
Kokanee Graphite Property

## Proposed Phase I Drilling Showing Potential Resource Area

February 2013

Figure to accompany NI43-101 report prepared by John Kerr

Figure 8a

## INTERPRETATION and CONCLUSIONS

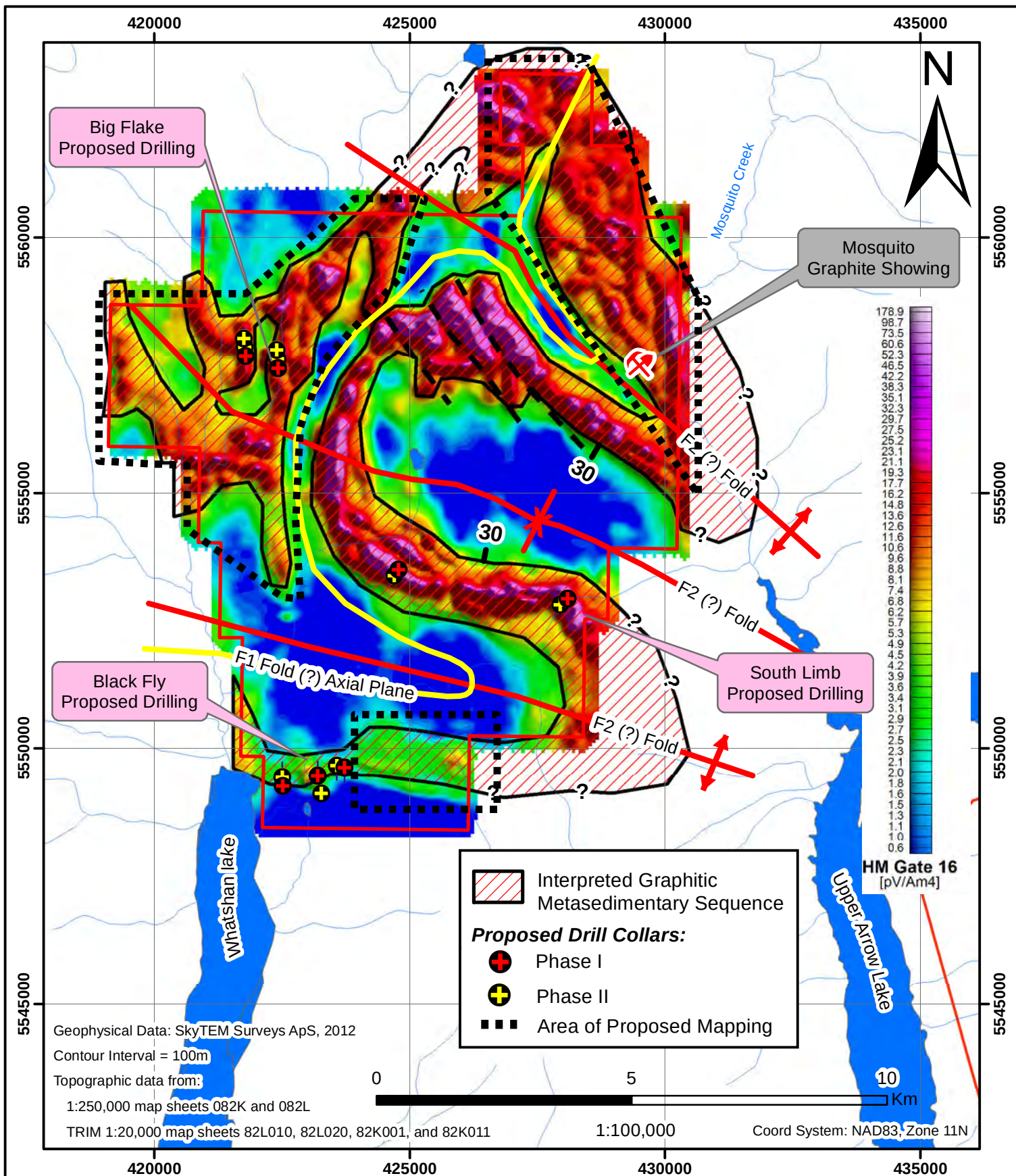
A sedimentary horizon within early Palaeozoic strata has sufficient indication to host a significant flake graphite mineral resource on the **Kokanee** property. For this reason, the property is considered an advanced stage exploration project, with excellent potential of developing a commercial supply of graphite.

The 2012 drill program was sufficiently encouraging to show a potential resource of 15,000,000 – 22,500,000 tonnes grading 1.65 – 1.80% graphite being present to down-depths of 100 – 150 meters and along a strike length of 1200 meters. The zone is of sufficient width to allow for quarry mining at W:O ratios of less than 1:1. This zone is open along both strike directions and at depth.

Continued work on the property is advancing the area of potential resource to a NI43-101 compliant resource as rapidly as possible. An 8-hole drill program totaling 2,000 meters is being recommended as the next phase of development.

A sedimentary horizon within mid to late Palaeozoic strata offers sufficient outcrop containing coarse flakes of graphite on the **Jumbo** property in contents ranging 0.5 – 6% content. There is every indication that these strata can host a significant resource of commercial grades of flake graphite. Sufficient work has been done on the property to select 16 targets for drilling, 7 being recommended as an initial phase drill program.





Noram Ventures Inc.

**Jumbo Graphite Property**

**Graphite Targets and Proposed Continuing Exploration**  
**On TEM (HM Z G16\_EA1) Base**

February, 2013

Figure to accompany NI43-101 report prepared by John Kerr

**Figure 8b**

## RECOMMENDATIONS

Kokanee Property: Continued drilling is recommended to be included in Phase I exploration to define a near-surface graphite resource along the entire length of the conductor, initially spaced at 200 meters. Care must be taken to drill through the complete mineralized stratigraphy. Higher-grade zones within the graphitic sequence could subsequently be drilled at 100m centers if resource categories needed upgrading. Figure 8a indicates the location of 8 proposed diamond drill holes, and details regarding these holes are presented below:

| Hole No      | Northing | Easting | Elevation | Bearing | Dip | Depth (m)    |
|--------------|----------|---------|-----------|---------|-----|--------------|
| KD13-007     | 5498968  | 511164  | 890m      | 168     | -50 | 250          |
| KD13-008     | 5499052  | 511356  | 897       | 150     | -50 | 250          |
| KD13-009     | 5499300  | 511670  | 875       | 130     | -50 | 250          |
| KD13-010     | 5499561  | 511828  | 835       | 110     | -50 | 250          |
| KD13-011     | 5499735  | 511868  | 802       | 106     | -50 | 250          |
| KD13-012     | 5500228  | 511958  | 692       | 100     | -50 | 250          |
| KD13-013     | 5400424  | 512011  | 665       | 100     | -50 | 250          |
| KD13-014     | 5500619  | 512063  | 634       | 100     | -50 | 250          |
| <b>Total</b> |          |         |           |         |     | <b>2.000</b> |

Detailed geological mapping should be expanded to the southwest and northeast extents of the EM conductor, and well outside of the zone to the northwest and southeast to define the limits of the graphitic sequence.

Bulk sampling and metallurgical testing are also recommended to define the potential quality and marketability of a graphite product.

Costs to complete the Phase I drill and testing program on the **Kokanee** property are estimated to be **\$430,000**, details as follows:

|                                                     |          |                   |
|-----------------------------------------------------|----------|-------------------|
| Program Planning and Senior Consultant              |          | \$12,000          |
| Supervision: Geologist 40 days @ 600/day            | \$24,000 |                   |
| Assistant: 40 days @ 250/day                        | 10,000   | 34,000            |
| Drilling: 2000 meters @ 120/meter                   |          | 240,000           |
| Permitting and Bonding                              |          | 15,000            |
| Site Preparation                                    |          | 12,000            |
| Analytical Costs: Assay Drill Core and Rock Samples | \$20,000 |                   |
| Metallurgical Costs                                 | 30,000   | 50,000            |
| Room and Board: 120 days @ 125/day                  |          | 15,000            |
| Vehicle Rentals:                                    |          | 5,000             |
| Miscellaneous Supplies and Rentals:                 |          | 5,000             |
| Contingency: ~ 10%                                  |          | 42,000            |
| <b>Total</b>                                        |          | <b>\$ 430,000</b> |

**Jumbo Property:** The Black Fly, Big Flake and South Limb showings are in areas of easy access, and higher than average grade, and are recommended as drill targets in the next phase of exploration. 16 sites (See Figure 8b) have been selected for drilling, 7 of which are included as Phase I (shown in red). Collars for the remaining 9 holes are shown in yellow, and would be contingent of the Phase I results. Details of the Phase I drill holes are as follows:

| Hole No      | Showing   | Northing | Easting | Elevation | Bearing | Dip | Depth (m)   |
|--------------|-----------|----------|---------|-----------|---------|-----|-------------|
| 001          | Big Flake | 5557457  | 422421  | 843       | 355     | -60 | 300         |
| 002          | Big Flake | 5557680  | 421784  | 830       | 355     | -60 | 300         |
| 003          | Black Fly | 5549266  | 422510  | 735       | 360     | -45 | 300         |
| 004          | Black Fly | 5549468  | 423199  | 720       | 360     | -45 | 300         |
| 005          | Black Fly | 5549633  | 423720  | 755       | 180     | -45 | 300         |
| 006          | S Limb    | 5553500  | 424785  | 1430      | 210     | -45 | 300         |
| 007          | S Limb    | 5552928  | 428088  | 850       | 210     | -45 | 300         |
| <b>Total</b> |           |          |         |           |         |     | <b>2100</b> |

Continued mapping and rock sampling would help to refine the geological interpretation and to possibly identify additional areas with higher grade graphite. The most obvious areas needing field review are peripheral to the Big Flake showing, east of the Black Fly showing, and north of the Mosquito showing. All these areas are at relatively low elevations along well maintained roads.

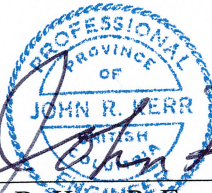
Some preliminary metallurgical testing is recommended to assist defining the quality and marketability of the graphite.

Costs to complete the Phase I drill program on the **Jumbo** property are estimated to be **\$450,000**, details as follows:

|                                                     |          |                   |
|-----------------------------------------------------|----------|-------------------|
| Program Planning and Senior Consultant              |          | \$ 12,000         |
| Supervision: Geologist 40 days @ 600/day            | \$24,000 |                   |
| Assistant: 40 days @ 250/day                        | 10,000   | 34,000            |
| Drilling: 2100 meters @ 120/meter                   |          | 252,000           |
| Permitting and Bonding                              |          | 20,000            |
| Site Preparation                                    |          | 20,000            |
| Analytical Costs: Assay Drill Core and Rock Samples | \$25,000 |                   |
| Metallurgical Costs                                 | 20,000   | 45,000            |
| Room and Board: 120 days @ 125/day                  |          | 15,000            |
| Vehicle Rentals:                                    |          | 5,000             |
| Miscellaneous Supplies and Rentals:                 |          | 5,000             |
| Contingency: ~10%                                   |          | 45,000            |
| <b>Total</b>                                        |          | <b>\$ 450,000</b> |

In summary, estimated costs for the Phase I exploration are \$ 430,000 on the **Kokanee Property** and are \$450,000 on the **Jumbo Property**. Total recommendations for graphite exploration are therefore estimated to be **\$880,000**.

It is also recommended that Noram retain the services of a graphite expert who understands the quality and markets of graphite products.



John R. Kerr, P. Eng.  
March 6, 2013

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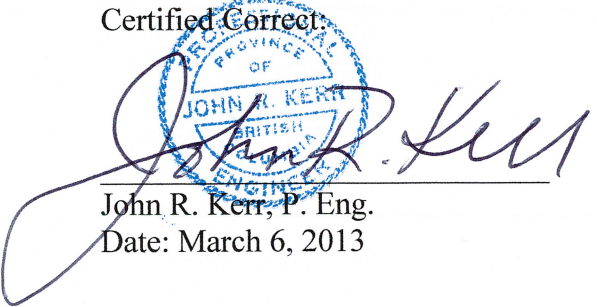
**CERTIFICATION of QUALIFIED PERSON**

I, **John R. Kerr**, of the City of Vancouver, B.C. hereby certify that:

- 1) I graduated with a BASc degree in geological engineering from the University of British Columbia, Vancouver, B.C. in 1964.
- 2) I am a consulting, contract geologist, with my address of business 208 - 515 West Pender Street, Vancouver, B.C. V6B 6H5.
- 3) I am a member in good standing of the Association of Engineers and Geoscientists of the Province of British Columbia (#6858).
- 4) I have worked as a geologist continuously for 45 years since graduation, all related to mineral exploration in the field and having considerable experience with industrial minerals of all nature. My field knowledge of graphite is extensive in all rocks of all areas in North America.
- 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, professional affiliation, 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 the content and preparation of the entire report entitled **TECHNICAL REPORT on the Kokanee and Jumbo Properties, British Columbia**, for Noram Ventures Inc. and dated March 6, 2013, relating to the mining claims. I visited the properties on April 10/11, June 14/15 and October 24/25, 2012. The purpose of these visits was for site examination, assessment of the mineral showings and diamond drill core and a general overview of property logistics.
- 7) There have been no material changes on the property since these inspections.
- 8) The author has had no prior direct involvement in work programs on the property, however has worked in the area of the claims in the 1970s and 1980s.
- 9) I am not aware of any material fact or material change that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.
- 10) I am independent of the issuer applying all tests in Section 1.4 of NI 43-101.
- 11) I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with this instrument and form.

I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their web-sites accessible by the public, of the Technical Report.

Certified Correct:

  
John R. Kerr, P. Eng.

Date: March 6, 2013

## **Appendix: Analytical Results Collected by the Writer**



1020 Cordova St. East Vancouver BC V6A 4A3 Canada

Acme Analytical Laboratories (Vancouver) Ltd.

[www.acmelab.com](http://www.acmelab.com)

**Client:**

**Kerr, John**

215 - 515 W Pender St.

Vancouver BC V6B 6H5 Canada

Submitted By:

John Kerr

Receiving Lab:

Canada-Vancouver

Received:

April 12, 2012

Report Date:

April 16, 2012

Page:

1 of 2

## CERTIFICATE OF ANALYSIS

VAN12001749.1

### CLIENT JOB INFORMATION

Project: None Given  
Shipment ID:  
P.O. Number  
Number of Samples: 7

### SAMPLE DISPOSAL

DISP-PLP Dispose of Pulp After 90 days  
DISP-RJT Dispose of Reject After 90 days

Acme does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

Invoice To: Kerr, John  
215 - 515 W Pender St.  
Vancouver BC V6B 6H5  
Canada

CC:

### SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

| Method Code | Number of Samples | Code Description                                  | Test Wgt (g) | Report Status | Lab |
|-------------|-------------------|---------------------------------------------------|--------------|---------------|-----|
| R200-250    | 7                 | Crush, split and pulverize 250 g rock to 200 mesh |              |               | VAN |
| 2A09        | 7                 | Ignite 600 Deg. C., HCl leach, residue by Leco    | 0.1          | Completed     | VAN |

### ADDITIONAL COMMENTS



This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted. \*\*\* asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.





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[www.acmelab.com](http://www.acmelab.com)

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**Kerr, John**  
215 - 515 W Pender St.  
Vancouver BC V6B 6H5 Canada

Project:

None Given

Report Date:

April 16, 2012

Page:

2 of 2

Part 1

## CERTIFICATE OF ANALYSIS

VAN12001749.1

|      | Method<br>Analyte<br>Unit<br>MDL | WGHT | 2A-C  |
|------|----------------------------------|------|-------|
|      |                                  | Wgt  | C/GRA |
|      |                                  | kg   | %     |
|      |                                  | 0.01 | 0.02  |
| K-01 | Rock                             | 0.82 | 2.41  |
| K-02 | Rock                             | 1.02 | 1.10  |
| K-03 | Rock                             | 1.89 | 0.72  |
| K-04 | Rock                             | 0.77 | 1.03  |
| K-05 | Rock                             | 1.28 | 3.18  |
| K-06 | Rock                             | 0.67 | 1.40  |
| K-07 | Rock                             | 0.81 | 2.28  |





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**Project:** None Given

**Report Date:** April 16, 2012

**Page:** 1 of 1 **Part** 1

## QUALITY CONTROL REPORT

VAN12001749.1

|                     |            | Method  | WGHT  | 2A-C  |
|---------------------|------------|---------|-------|-------|
|                     |            | Analyte | Wgt   | C/GRA |
|                     |            | Unit    | kg    | %     |
|                     |            | MDL     | 0.01  | 0.02  |
| Pulp Duplicates     |            |         |       |       |
| K-04                | Rock       |         | 0.77  | 1.03  |
| REP K-04            | QC         |         |       | 1.00  |
| K-06                | Rock       |         | 0.67  | 1.40  |
| REP K-06            | QC         |         |       | 1.32  |
| Reference Materials |            |         |       |       |
| STD CSC             | Standard   |         |       | 1.90  |
| STD CSC             | Standard   |         |       | 2.07  |
| STD CSC             | Standard   |         |       | 1.96  |
| STD CSC Expected    |            |         |       | 2.05  |
| BLK                 | Blank      |         |       | <0.02 |
| BLK                 | Blank      |         |       | <0.02 |
| Prep Wash           |            |         |       |       |
| G1                  | Prep Blank |         | <0.01 | <0.02 |



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Client:

**Kerr, John**

215 - 515 W Pender St.

Vancouver BC V6B 6H5 Canada

Submitted By: John Kerr

Receiving Lab: Canada-Vancouver

Received: June 18, 2012

Report Date: July 04, 2012

Page: 1 of 2

## CERTIFICATE OF ANALYSIS

VAN12002774.1

### CLIENT JOB INFORMATION

Project: None Given

Shipment ID:

P.O. Number

Number of Samples: 6

### SAMPLE DISPOSAL

STOR-PLP Store After 90 days Invoice for Storage

DISP-RJT Dispose of Reject After 90 days

Acme does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

Invoice To: Kerr, John  
215 - 515 W Pender St.  
Vancouver BC V6B 6H5  
Canada

CC:

### SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

| Method Code | Number of Samples | Code Description                                  | Test Wgt (g) | Report Status | Lab |
|-------------|-------------------|---------------------------------------------------|--------------|---------------|-----|
| R200-250    | 6                 | Crush, split and pulverize 250 g rock to 200 mesh |              |               | VAN |
| 2A09        | 6                 | Ignite 600 Deg. C., HCl leach, residue by Leco    | 0.1          | Completed     | VAN |
| 1DX2        | 3                 | 1:1:1 Aqua Regia digestion ICP-MS analysis        | 15           | Completed     | VAN |

### ADDITIONAL COMMENTS



This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted. "\*" asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.





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**Project:** None Given  
**Report Date:** July 04, 2012

**Page:** 2 of 2

**Part:** 1 of 2

## CERTIFICATE OF ANALYSIS

VAN12002774.1

|      | Method<br>Analyte<br>Unit<br>MDL | WGHT | 2A-C  | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 |
|------|----------------------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|      |                                  | Wgt  | C/GRA | Mo    | Cu    | Pb    | Zn    | Ag    | Ni    | Co    | Mn    | Fe    | As    | Au    | Th    | Sr    | Cd    | Sb    | Bi    | V     | Ca    |
|      |                                  | kg   | %     | ppm   | ppm   | ppm   | ppm   | ppm   | ppm   | ppm   | ppm   | %     | ppm   | ppb   | ppm   | ppm   | ppm   | ppm   | ppm   | ppm   | %     |
|      |                                  | 0.01 | 0.02  | 0.1   | 0.1   | 0.1   | 1     | 0.1   | 0.1   | 0.1   | 1     | 0.01  | 0.5   | 0.5   | 0.1   | 1     | 0.1   | 0.1   | 0.1   | 2     | 0.01  |
| A-01 | Rock                             | 1.26 | 0.86  | 4.7   | 62.3  | 7.8   | 24    | 0.1   | 39.9  | 12.0  | 110   | 1.71  | <0.5  | 3.1   | 1.7   | 171   | 0.3   | <0.1  | 0.3   | 18    | 3.64  |
| A-02 | Rock                             | 0.95 | 0.79  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  |       |
| A-03 | Rock                             | 1.15 | 0.95  | 3.4   | 57.5  | 2.6   | 227   | 0.7   | 57.0  | 11.8  | 444   | 3.59  | <0.5  | 2.9   | 1.3   | 17    | 1.2   | <0.1  | 0.3   | 193   | 0.22  |
| A-04 | Rock                             | 0.90 | 5.11  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  |       |
| K-10 | Rock                             | 0.80 | 2.60  | 24.2  | 72.5  | 23.8  | 176   | 0.2   | 46.2  | 4.5   | 102   | 1.68  | <0.5  | 3.4   | 2.9   | 9     | 2.7   | <0.1  | 0.2   | 188   | 0.15  |
| K-11 | Rock                             | 1.01 | 5.73  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  |       |



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Project: None Given  
Report Date: July 04, 2012

Page: 2 of 2

Part: 2 of 2

## CERTIFICATE OF ANALYSIS

VAN12002774.1

|      | Method<br>Analyte<br>Unit<br>MDL | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 |
|------|----------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|      |                                  | P     | La    | Cr    | Mg    | Ba    | Ti    | B     | Al    | Na    | K     | W     | Hg    | Sc    | Tl    | S     | Ga    | Se    |
|      |                                  | %     | ppm   | ppm   | %     | ppm   | %     | ppm   | %     | %     | %     | ppm   | ppm   | ppm   | ppm   | %     | ppm   | ppm   |
|      |                                  | 0.001 | 1     | 1     | 0.01  | 1     | 0.001 | 1     | 0.01  | 0.001 | 0.01  | 0.1   | 0.01  | 0.1   | 0.1   | 0.05  | 1     | 0.5   |
| A-01 | Rock                             | 0.142 | 7     | 11    | 0.13  | 47    | 0.075 | <1    | 1.67  | 0.242 | 0.10  | 0.1   | <0.01 | 0.7   | <0.1  | 0.98  | 4     | 0.8   |
| A-02 | Rock                             | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  |
| A-03 | Rock                             | 0.075 | 4     | 88    | 1.20  | 129   | 0.240 | 2     | 1.65  | 0.060 | 1.15  | <0.1  | <0.01 | 11.2  | 1.0   | 1.22  | 10    | 4.3   |
| A-04 | Rock                             | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  |
| K-10 | Rock                             | 0.051 | 7     | 46    | 0.30  | 144   | 0.048 | <1    | 0.76  | 0.004 | 0.12  | 0.2   | <0.01 | 1.8   | <0.1  | 0.11  | 3     | 2.8   |
| K-11 | Rock                             | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  |





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Project: None Given  
Report Date: July 04, 2012

Page: 1 of 1

Part: 1 of 2

## QUALITY CONTROL REPORT

VAN12002774.1

|                     | Method<br>Analyte<br>Unit<br>MDL | WGHT  | 2A-C  | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15  |
|---------------------|----------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
|                     |                                  | Wgt   | C/GRA | Mo    | Cu    | Pb    | Zn    | Ag    | Ni    | Co    | Mn    | Fe    | As    | Au    | Th    | Sr    | Cd    | Sb    | Bi    | V     | Ca     |
|                     |                                  | kg    | %     | ppm   | ppm   | ppm   | ppm   | ppm   | ppm   | ppm   | ppm   | %     | ppm   | ppb   | ppm   | ppm   | ppm   | ppm   | ppm   | ppm   | %      |
|                     |                                  | 0.01  | 0.02  | 0.1   | 0.1   | 0.1   | 1     | 0.1   | 0.1   | 0.1   | 0.1   | 1     | 0.01  | 0.5   | 0.5   | 0.1   | 1     | 0.1   | 0.1   | 0.1   | 2      |
| Pulp Duplicates     |                                  |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |        |
| K-11                | Rock                             | 1.01  | 5.73  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.   |
| REP K-11            | QC                               | 6.06  |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |        |
| Reference Materials |                                  |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |        |
| STD CSC             | Standard                         | 2.04  |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |        |
| STD CSC             | Standard                         | 2.05  |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |        |
| STD CSC             | Standard                         | 2.23  |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |        |
| STD DS9             | Standard                         |       |       | 13.8  | 112.0 | 128.4 | 313   | 1.9   | 42.5  | 8.0   | 595   | 2.35  | 26.6  | 110.6 | 7.0   | 79    | 2.2   | 6.6   | 7.8   | 40    | 0.75   |
| STD DS9 Expected    |                                  |       |       | 12.84 | 108   | 126   | 317   | 1.83  | 40.3  | 7.6   | 575   | 2.33  | 25.5  | 118   | 6.38  | 69.6  | 2.4   | 4.94  | 6.32  | 40    | 0.7201 |
| STD CSC Expected    |                                  | 2.05  |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |        |
| BLK                 | Blank                            |       |       | <0.1  | <0.1  | <0.1  | <1    | <0.1  | <0.1  | <0.1  | <1    | <0.01 | <0.5  | <0.5  | <0.1  | <1    | <0.1  | <0.1  | <0.1  | <2    | <0.01  |
| BLK                 | Blank                            | <0.02 |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |        |
| BLK                 | Blank                            | <0.02 |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |        |
| Prep Wash           |                                  |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |        |
| G1                  | Prep Blank                       | <0.01 | <0.02 | 0.2   | 3.0   | 4.8   | 56    | <0.1  | 2.9   | 4.5   | 629   | 2.04  | <0.5  | 4.1   | 5.7   | 71    | <0.1  | <0.1  | <0.1  | 37    | 0.50   |





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Project:

None Given

Report Date:

July 04, 2012

Page:

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Part:

2 of 2

## QUALITY CONTROL REPORT

VAN12002774.1

|                     | Method<br>Analyte<br>Unit<br>MDL | 1DX15  | 1DX15 | 1DX15 | 1DX15  | 1DX15 | 1DX15  | 1DX15 | 1DX15  | 1DX15  | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15  | 1DX15 | 1DX15 | 1DX15 |
|---------------------|----------------------------------|--------|-------|-------|--------|-------|--------|-------|--------|--------|-------|-------|-------|-------|-------|--------|-------|-------|-------|
|                     |                                  | P      | La    | Cr    | Mg     | Ba    | Ti     | B     | Al     | Na     | K     | W     | Hg    | Sc    | Tl    | S      | Ga    | Se    | Te    |
|                     |                                  | %      | ppm   | ppm   | %      | ppm   | %      | ppm   | %      | %      | %     | ppm   | ppm   | ppm   | ppm   | %      | ppm   | ppm   | ppm   |
|                     |                                  | 0.001  | 1     | 1     | 0.01   | 1     | 0.001  | 1     | 0.01   | 0.001  | 0.01  | 0.1   | 0.01  | 0.1   | 0.1   | 0.05   | 1     | 0.5   | 0.2   |
| Pulp Duplicates     |                                  |        |       |       |        |       |        |       |        |        |       |       |       |       |       |        |       |       |       |
| K-11                | Rock                             | N.A.   | N.A.  | N.A.  | N.A.   | N.A.  | N.A.   | N.A.  | N.A.   | N.A.   | N.A.  | N.A.  | N.A.  | N.A.  | N.A.  | N.A.   | N.A.  | N.A.  | N.A.  |
| REP K-11            | QC                               |        |       |       |        |       |        |       |        |        |       |       |       |       |       |        |       |       |       |
| Reference Materials |                                  |        |       |       |        |       |        |       |        |        |       |       |       |       |       |        |       |       |       |
| STD CSC             | Standard                         |        |       |       |        |       |        |       |        |        |       |       |       |       |       |        |       |       |       |
| STD CSC             | Standard                         |        |       |       |        |       |        |       |        |        |       |       |       |       |       |        |       |       |       |
| STD CSC             | Standard                         |        |       |       |        |       |        |       |        |        |       |       |       |       |       |        |       |       |       |
| STD DS9             | Standard                         | 0.082  | 14    | 126   | 0.63   | 304   | 0.121  | 3     | 1.01   | 0.084  | 0.40  | 3.0   | 0.21  | 2.5   | 5.3   | 0.16   | 5     | 4.7   | 5.2   |
| STD DS9 Expected    |                                  | 0.0819 | 13.3  | 121   | 0.6165 | 295   | 0.1108 |       | 0.9577 | 0.0853 | 0.395 | 2.89  | 0.2   | 2.5   | 5.3   | 0.1615 | 4.59  | 5.2   | 5.02  |
| STD CSC Expected    |                                  |        |       |       |        |       |        |       |        |        |       |       |       |       |       |        |       |       |       |
| BLK                 | Blank                            | <0.001 | <1    | <1    | <0.01  | <1    | <0.001 | <1    | <0.01  | <0.001 | <0.01 | <0.1  | <0.01 | <0.1  | <0.1  | <0.05  | <1    | <0.5  | <0.2  |
| BLK                 | Blank                            |        |       |       |        |       |        |       |        |        |       |       |       |       |       |        |       |       |       |
| BLK                 | Blank                            |        |       |       |        |       |        |       |        |        |       |       |       |       |       |        |       |       |       |
| Prep Wash           |                                  |        |       |       |        |       |        |       |        |        |       |       |       |       |       |        |       |       |       |
| G1                  | Prep Blank                       | 0.080  | 13    | 7     | 0.53   | 170   | 0.129  | <1    | 1.01   | 0.083  | 0.53  | <0.1  | <0.01 | 2.6   | 0.3   | <0.05  | 5     | <0.5  | <0.2  |