

# ASSESSMENT REPORT TITLE PAGE AND SUMMARY

TITLE OF REPORT: Geological and Geochemical Work – Assessment Report on the Doreen Project, Cariboo Mining District, British Columbia

TOTAL COST: **\$17,697.00** 

AUTHOR(S): Rein Turna SIGNATURE(S): "Signed" NOTICE OF WORK PERMIT NUMBER(S)/DATE(S): STATEMENT OF WORK EVENT NUMBER(S)/DATE(S): 5677470 (October 20, 2017 to December 13, 2017

YEAR OF WORK: 2017 PROPERTY NAME: Doreen CLAIM NAME(S) (on which work was done) 1055620 (DOR Group)

COMMODITIES SOUGHT: Gold, Silver & Copper MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN: N/K MINING DIVISION: Cariboo BCGS: 093A/07W LATITUDE 52° 17' 30" LONGITUDE 120° 57' UTM Zone NAD 83 EASTING 640000 NORTHING 5797000

OWNER(S): Barker Minerals Ltd. MAILING ADDRESS: 8384 Toombs Drive Prince George BC, V2K 5A3

OPERATOR(S) [who paid for the work]: **Barker Minerals Ltd.** MAILING ADDRESS: **8384 Toombs Drive Prince George BC, V2K 5A3** 

REPORT KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude **do not use abbreviations or codes**) **Upper Triassic, Lower Jurrassic, Andesitic Volcanics, Gold, Silver & Copper** 

# REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS

THIS REPORT	(in metric units)		APPORTIONED (incl. support)
GEOLOGICAL (scale, area)			
Ground, mapping	N/A		
Photo interpretation	N/A		
GEOPHYSICAL (line-kilometres)			
Ground	N/A		
Magnetic	N/A		
Electromagnetic	N/A		
Induced Polarization	N/A		
Radiometric	N/A		
Seismic	N/A		
Other	N/A		
Airborne	N/A		
GEOCHEMICAL (number of sample			
Soil	93	1055620	8,980.57
Silt	N/A		
Rock	N/A		
Other			
DRILLING (total metres, number of	f holes, size, storage location)		
Core	N/A		
Non-core	N/A		
RELATED TECHNICAL			
Sampling / Assaying	93	1055620	8,716.43
Petrographic	N/A		
Mineralographic	N/A		
Metallurgic	N/A		
PROSPECTING (scale/area)	N/A		
PREPATORY / PHYSICAL			
Line/grid (km)	N/A		
Topo/Photogrammetric (sca	ale, area) N/A		
Legal Surveys (scale, area)	) N/A		
Road, local access (km)/tra	il N/A		
Trench (number/metres)	N/A		
Underground development	(metres) N/A		
Other	N/A		
		TOTAL COST	\$17,697.00

# **GEOLOGICAL & GEOCHEMICAL**

ASSESSMENT REPORT

on the

# DOREEN PROPERTY

Cariboo Mining Division, British Columbia

52° 17' 30" North Latitude and 120° 57' West Longitude or 640000 E and 5797000 N UTM coordinates (NAD 83)

N.T.S. Map No. 93A/07W

Work was completed on claim # 1055620



for

Barker Minerals Ltd. 8384 Toombs Drive Prince George, B.C. V2K 5A3

> Prepared by: Rein Turna

May 2, 2018 Amended September 26, 2018

#### 1.0 SUMMARY

93 soil samples were collected in 2017 along the bank of an overgrown road in the southern portion of the Doreen property.

The primary element explored for is gold. Many of the samples were anomalous in zinc and copper, considered to be the main pathfinder elements. Soil sample Nos. 4917 and 4960 had 9.31 ppm Au and 10.35 ppm Au. The same samples were weakly anomalous in copper, as indicated below.

Au	Zn	Cu
ppm	ppm	ppm
9.31	106	125
10.35	106	152
	ppm 9.31	

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#### 2.0 INTRODUCTION

This report describes the work done on the Doreen property area and provides results of rock and soil sampling done by Barker Minerals Ltd. in 2017.

In this report chemical abbreviations are used for the elements discussed. The elements and abbreviations are:

Au Gold

Cu Copper

Zn Zinc

other abbreviations:

ppb parts per billion ppm parts per million XRF x-ray florescence

#### 3.0 PROPERTY DESCRIPTION and LOCATION

The Doreen Property consists of one amalgamated mineral claim, named Dor Group, with tenure number 1055620, shown in Figure No. 2. – Barker Minerals Ltd. Doreen claim. The mineral claim comprising the Doreen Property are located 30 km east of the town of Horsefly, British Columbia. The mineral claim I is located in the Cariboo Mining Division in British Columbia and is 100% owned by Barker Minerals Ltd. of Prince George, B.C.

The geographic coordinates of the Doreen property are: 52° 17' 30" North Latitude and 120° 57' West Longitude or 640000 E and 5797000 N UTM coordinates (NAD 83). The relevant map is: N.T.S. Map No. 93A/07W.

#### 4.0 MINERAL CLAIMS

<u>Tenure</u> <u>Number</u>	Owner No.	<u>Owner</u>		<u>Good To</u> <u>Date</u>	<u>Status</u>	<u>Area</u> <u>(ha)</u>	
1055620	140410	Barker Minerals Ltd.	100%	2019/SEP/15	Good	1620.45	

Total Area is 1,620.45 ha

Table No. 1 – Doreen Property Mineral Claim Details, Barker Minerals Ltd.



Figure No. 1 Barker Minerals Ltd. Doreen property location in British Columbia.

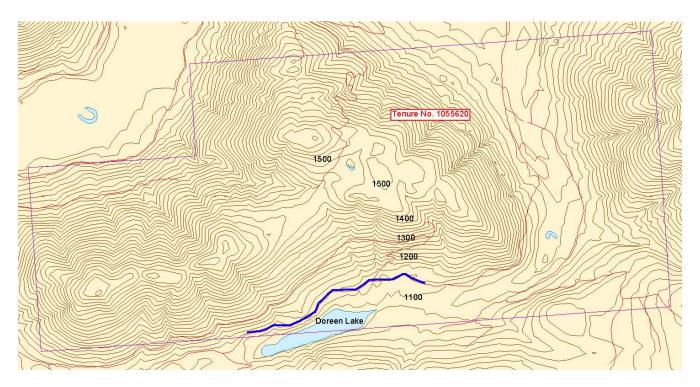


Figure No. 2 Barker Minerals Ltd. Doreen claim with tenure number and elevations marked. The blue line on the north side of Doreen Lake represents the soil sampling line in 2017.

#### 5.0 PHYSIOGRAPHY and ACCESSIBILITY

The property is situated regionally in the Interior Plateau physiographic area. Glacial drift of various depths occur on the property with outcrop scarce except in the higher elevation areas where a moderate amount of outcrop is exposed and will be mapped in follow up programs. Overburden is thin in the eastern part of the claims but increase in depth to the west.

The climate is typical for the central interior, with warm summers and moderately cold winters. Annual precipitation is around 40 centimetres.

The project area has been ravaged by beetle bug kill and is being actively logged for fir, spruce and pine in the area, principally during winters, which has created significant road access to the project areas.

The claims area covers moderately dissected, rolling hills near the transition between the Interior Plateau on the west and the Cariboo Mountains. on the east. Relief is about 500 m, from Doreen Lake (950 m elev.) to the hill on the north (1,550 m elev.)

Forests of cedar, fir, balsam and spruce cover the eastern and southern claims area. These have been logged in part recently. A large burn covers the remainder of the claims, and it has light to moderate second growth.

The south-facing slope north of the east end of Doreen Lake has been burned and logged. A network of old skid trails and recent bulldozer trails built by Eureka Resources, Inc. reaches the south-central part of the property where most of the exploration work has been done.

The Doreen Property is situated some 85 km east of Williams Lake, British Columbia, within National Topographic System area 93A/7W, and is centered at 120° 57'W longitude and 52° 17'30"N latitude (Figure No. 2). Road access to the property is east for 55 kilometers on the paved road from 150 Mile House to Horsefly River for about 30 km to a branch road that goes south up Doreen Creek to Doreen Lake.

#### 6.0 HISTORY

#### 6.1 Work done in 1974.

The Minister of Mines Annual Report for 1974 (GEM 1974, pg 239) reports geological mapping and 62 soil samples collected on the DO claims on the north side of Doreen Lake at the 4,000 foot elevation. Disseminated pyrite and chalcopyrite occurred where diorite intrudes Jurassic sedimentary rocks. The work was done by Dome Exploration (Canada) Ltd. and Newconex Canadian Exploration Ltd. There are no records known of the results of this or any other work done before 1981.

#### 6.2 Work done in 1981.

The relevant report is Assessment Report 10118 by Belik, G.D., 1981. Work was done on the Dor Claims owned by Keron Holdings Ltd. 330 soil samples collected over a 3.5 line-km sampling grid had scattered anomalous Cu and Au. It was deemed there was a potential for porphyry-type Cu/Au mineralization. Follow up mapping and prospecting and rock and soil sampling was recommended.

#### 6.3 Work done in 1983.

The relevant report is Assessment Report 11905 by Kerr, J.R., 1983 Work was done on the Dor Claims owned by Eureka Resources Inc. A 1,000 m long, E-W striking, Au anomaly was indicated by the soil survey. This coincided with a conductor anomaly indicated by the VLF-EM survey done over 3,000 m on the established grid. 887 soil samples over a grid and 45 rock samples were collected; these were analyzed for Au only. A sample of surficial fragmental ferricrete had 4,800 ppb Au. Some boulders of massive pyrrhotite, pyrite and chalcopyrite in the ferricrete assayed 0.022 to 0.155 oz/T Au.

The 1,000 m E-W geochemical and conductor anomaly paralleled a strong fracture and shear trend in outcrops. This suggested the anomaly was possibly related to replacement type mineralization in a structural system, The possibility of stratabound VMS mineralization was not ruled out.

Trenching, 500 m of diamond drilling and further soil sampling and an extension of the VLF-EM survey was recommended.

#### 6.4 Work done in 1984.

The relevant report is Assessment Report 13172 by Baerg R.J., and Bradish, L., 1984. Noranda Exploration Co. Ltd. conducted diamond drilling, geological, geochemical and geophysical surveys over the Dor claims, under option from the owners, Eureka Resources Inc. The property was now titled the Doreen Lake Property.

144 soil profile samples were collected and analyzed for base and precious metals. Fairly good correlations between Au, Cu and Mo were established and the known Au anomaly was substantiated.

HLEM, MAG and IP geophysical surveys were performed. The results suggested the E-W anomaly target was possibly related to the presence of a mineralized shear zone or narrow alteration zone.

Two short diamond drill holes, totaling 143 m, were done. The drilling determined the E-W conductor and Au geochemical anomaly discovered by Eureka the previous year was related to zones of disseminated and massive pyrrhotite. The controlling structures appeared to be open fractures or shears. The target zone, encountered in both holes, was 5.6 m and 11.0 m in true

thickness. Core recovery was poor, averaging 70-80%, in broken rock. The zone contained pyrrhotite, with minor pyrite and trace chalcopyrite as massive veins and disseminations. The core in the zone had low Au values.

Mechanical trenching was attempted but was curtailed prematurely due to steep slopes and shallow overburden.

In the end, it was deemed the 1,000 m E-W Au anomaly and conductor, discovered by Eureka the previous year, was related to isolated pods of Cu-Au bearing iron sulphides. No further work was recommended.

#### 6.5 Work done in 1984-1985.

Work was resumed on the Dor claims by Eureka Resources Inc., as Noranda had apparently let go their option on the property. The new work was not reported in public assessment reports at the time, though it was evidently described in private company Summary reports. K.V. Campbell (Ass. Rpt. 17089, pgs. 15-16 and Fig. No. 7, 1988) provides some information:

Some of the core from Noranda's drill program in 1984 was re-sampled. Further soil and rock sampling was done. Trenching and chip sampling in 1985 uncovered several narrow bands of massive pyrrhotite and pyrite. A sample of massive sulphide float had 68,000 ppb Au. A rock chip sample had 12,550 ppb Au. Other rock samples had Au values of several hundred or thousand ppb.

#### 6.6 Work done in 1984.

The relevant report is Assessment Report 13339 by Wells, R.A., 1984. Work was done on the HFR claims owned by Mr. Maurice Mathieu. These claims were staked in 1983 and worked by Mr. Mathieu during Sept.-Oct., 1984. The HFR claims covered a portion of the pre-existing Dor claims, worked by Noranda in 1984. The claim maps in the relevant assessment reports suggest the overlapping properties may have been partially in conflict.

400 soil samples were collected on the HFR property along reconnaissance traverses and analyzed for Au. The sample location map suggests some of the soils were inadvertently collected on the area of Noranda's Doreen Lake Property. There were no significant results in any case and no further work on HFR was recommended.

#### 6.7 Work done in 1987.

The relevant report is Assessment Report 17089 by Campbell, K.V., 1988. Work was done on the Doreen Lake Property still owned by Eureka Resources Inc. The property consisted of the original Dor claims, staked in 1981. The deposit type sought at this stage was Au-bearing pyritic stockworks and disseminated pyrite in altered volcanic rocks, similar to the QR gold mine, 70 km to the northwest. Work in 1987 consisted mainly of geological mapping and modeling. A few rock and soil samples were collected for thin section and geochemical analysis. The work resulted in a comprehensive description of the geology.

The soil samples affirmed the presence of the known E-W Au soil anomaly. A good positive correlation was observed between Au and Ag, Fe, Mo and Cu, with Cu and Fe having the best correlation with Au. No such correlation existed for Pb, V or Co.

Though it was concluded that the geochemistry for Doreen did not appear the same as that at the QR deposit, there remained a possibility that Au mineralization had a genetic relationship with a mapped diorite stock nearby to the south. Fractures, shears, breccias and otherwise permeable zones were considered to be the likely types of ore trap on Doreen. More extensive geological mapping and prospecting was recommended to discover such structural traps and possible alteration zones which, at QR, coincide with the main ore zone. A two-stage exploration program was recommended to include mapping, VLF-EM and MAG surveys and drilling.

#### 6.8 Work done in 1988.

The relevant report is Assessment Report 17905 by Leishman, D.A., 1988. Mechanical trenching was done on the Doreen Lake Property (Dor claims) by Eureka Resources Inc. Two trenches, approximately 50 m each, were excavated. The work was hampered by steep terrain and locally deep overburden. 27 rock samples, collected from the trenches, had no important Au geochemical results, the highest value being 21 ppb.

Steep terrain prevented the trenches being excavated near to the known Au soils anomaly. It was recommended diamond drilling would be the best way to properly test the Au soils anomaly in the future.

#### 6.9 Work done in 1989.

The relevant report is Assessment Report 19551 by Barker, G.E., and Bysouth, G.D., 1990. Gibraltar Mines. Ltd. conducted diamond drilling over the Dor claims under option from the owners, Eureka Resources Inc. The property was now titled the Dor Mineral Claim Group, which included the claims owned by Eureka and some new claims owned by Gibraltar. Six drill holes (1,214 m) were completed. The drilling target was the inferred bedrock source of the large Au soil anomaly previously outlined by Eureka, and to determine the geological nature of the sulphide mineralization within and near the Au soil anomaly.

It was concluded that the drill program results indicated a plutonic porphyry mineralizing system was responsible for the geochemical anomaly. An IP geophysical survey was recommended to be done over most of the property and resulting anomalies be tested by drilling.

#### 6.10 Work done in 1990.

The relevant report is Assessment Report 21291 by Barker, G.E., 1991

The assessment report states that Gibraltar Mines. Ltd. conducted an IP geophysical survey (totaling 12,000 m) and diamond drilling (totaling 1,067 m) over the Dor claims, under option from the owners, Eureka Resources Inc. The results of only one drill hole (214 m) were presented in the assessment report, though a statement was provided "no significant widths of ore grade material were encountered." Graphite and disseminated sulphides, in the hole reported on, were deemed sufficient to produce an IP anomaly. None of the IP survey was presented. The Statement of Expenditures was for only \$8,362.65. The conclusion stated "no further work would be recommended within the general area around [the] drill hole."

#### 6.11 Work done in 2010.

The relevant report is Assessment Report 31633 by Doyle, L.E., 2010. Work was done on the Dorfly claims (Dorfly Project) by owner L.E. Doyle. These new claims covered the entire area of the former Dor Claims of Eureka Resources within a larger overall area. The old access road was refurbished and grid lines were cut for soil sampling. The purpose was to perform comprehensive surveys in the near future in a new effort to assess the 1,000 m E-W Au geochemical and EM conductor anomaly discovered in 1983 by Eureka Resources.

# 6.12 Work done in 2012.

The relevant report is Assessment Report 33621 by Doyle, L.E., 2013. Barker Minerals Ltd. staked a new group of mineral claims (Doreen Project) over the area of the former Dorfly and Dor claims on the north side of Doreen Lake. 55 soil samples and 2 rock samples were collected in the area of the 1,000 m E-W Au anomaly from the 1983 survey. 22 of the soil samples were anomalous in Au, as determined by XRF analysis, a semi-quantitative method. The XRF analysis method can determine anomalies of low, medium or high intensity; conventional assay methods could subsequently determine accurate grades. It was recommended that geological, geochemical and geophysical surveys and drilling be done over the Doreen property to provide a definitive assessment of the 1,000 m anomaly, which was not adequately tested in previous work.

# 6.13 Work done in 2014.

The relevant report is Assessment Report 35244 by Turna, R., 2015.

171 rock and 38 soil samples were collected over gossanous outcrops containing quartz veins in areas designated Area A and Area B. Area A includes the "North Showing". A rock sample in Area A had 23 ppm Au, and a soil in Area B had 10 ppm Au. Many samples were anomalous in Cu and Zn. Follow up sampling and mapping was recommended for both areas.

# 6.14 Work done in 2015.

The relevant Assessment Report 36035 by Turna, R., 2016.

419 rock samples were collected in systematic sampling at the North Showing in Area A. An extensive gossan here tended to mask the rock types which were considered to be interbedded andesites and argillites and quartz veins. Continued sampling and mapping were recommended.

#### 7.0 GEOLOGY

#### 7.1 Regional Geology

The geological descriptions *in italics* below are sourced from Doyle, L.E. (2013).

The area referred to as the Quesnay Gold Belt lies within the Quesnay Trough, a linear belt of early Mesozoic volcanic and sedimentary rocks lying between the Omineca Crystalline Belt (early Paleozoic and Precambrian metasedimentary rocks) on the east and the Pinchi Geanticline (Paleozioc Cache Creek Group) on the west (Figure No. 3).

The Quesnay Trough in the section is composed of alkalic volcanics, volcaniclastics and sedimentary rocks intruded by comagmatic stocks and dike complexes (Campbell, 1978). The basal unit of the Trough is of Upper Triassic black argillite, located along the eastern boundary of the Trough and representing a back arc basinal facies.

Above the argillite unit lie a succession of augite porphyry breccias and flows with subordinate interbedded argillites. This area in turn is overlain by volcaniclastics and argillites of Upper Triassic and Lower Jurassic age.

Several volcanic centers emerged in the Lower Jurassic. These are recognized by subaerial volcanic flows and composite lenses of sandstone, grit and conglomerate (Saleken and Simpson (1984). Between Horsefly Lake and Horsefly River, Panteleyev (1987) considers that felsic-clast conglomerates mark a series of small grabens, which may be part of a series of larger, northwesterly trending grabens along the medial axis of a volcanic arc. This same structural zone could have controlled emplacement of volcanic centers.

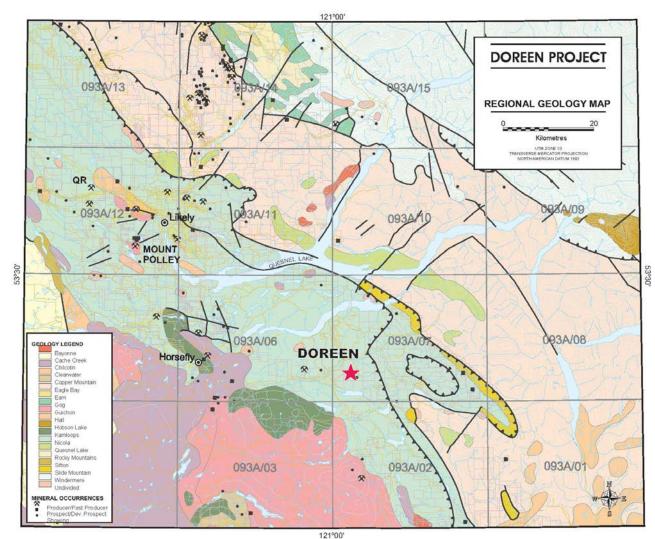


Figure No. 3 Regional Geology.

#### 7.2 Local Geology

The Doreen claims are underlain by Upper Triassic – Lower Jurassic interbedded andesitic volcanics and argillites, which have been intruded by at least one small plug of quartz diorite north of Doreen Lake.

The black argillites have been hornfelsed into hard, flinty material, which is highly shattered, sheared and brecciated. Fine laminations are discernible in a few places and a fine fracture cleavage filled with quartz was noted in one case. Iron oxide coatings are common and some outcrops are thickly coated with gossan. The argillites have locally been bleached to light gray and is some places show partial silicification. Fine quartz stringers are common but not pervasive, as are iron oxide and fine pyrite-filled fractures. Where both quartz and pyrite stringers are present pyrite crosscuts quartz.

The volcanic rocks are predominantly hornblende andesite with subordinate hornblende – pyroxene andesite. All those seen by the author in the main work area are flows, breccias

or possibly volcaniclastics. In most cases the groundmass was either so fined grained, glassy

and opaque or so altered the rocks could not be readily classified. Some did have the appearance of being dike rock (slightly coarser grained, less porphyritic) with a texture intermediate between typical flows and intrusives.

Feldspar is extensively saussuritized and sericitized. The groundmass has been variously altered to an assemblage of carbonate, chlorite, iron oxides, and less commonly, minor epidote. Some rocks have been silicified, with abundant crystocrystalline light gray quartz and quartz-filled stringers. Fine pyrite is ubiquitous, coating joint surfaces, forming irregular blebs to ½ cm, disseminations and filling fine fractures.

The quartz diorite to the north of Doreen Lake is of fine to medium grained, pale green pyroxene set in feldspar groundmass that includes some intergranular quartz...It would be useful to know the extent of the plug or stock and if the mineralogy or alteration is zoned.

The structure has been mapped as interbedded volcanic and sedimentary rocks striking about 040°. The few bedding measurements made confirm this general strike and indicate a dip of 50-60° to the northeast.

#### 7.3 Economic Target

Three general types of gold deposits are possible on the project, gold-bearing veins, stratabound occurrences and copper-gold porphyry type deposits.

The Doreen occurrence is classed as vein type. There are crosscutting vein-like bodies of massive pyrrhotite and pyrite in the area, some parts of which do carry gold. However, there is scarcity of megascopic quartz veining and the Doreen occurrence should not be confused with the gold-quartz veins in the Upper Triassic rock units to the east.

The largest and most developed gold deposits are associated with the early Jurassic plutons, namely the Cariboo-Bell deposit and the QR deposit. The Cariboo-Bell (Mount Polley) deposit, 9 km southwest of Likely, has mineable reserves of 117 million tons grading 0.31% Cu and 0.012 oz Au/ton. Mineralization is mainly confined to high level, intrusive breccia zones within an alkalic laccolith of early Jurassic age emplaced at the site of an Upper Triassic eruptive center (Saleken and Simpson, 1984).

The QR deposit, 15 km northwest of Likely, has a mineral inventory of about 1.1 million tons grading 0.2 oz Au/ton. Gold mineralization is located within a 300 m wide alteration halo about the QR stock in vocaniclastics, blocky basaltic conglomerate and breccia, and hornfelsed sediments. The QR stock has diorite margin and monzonite core (Fox et al, 1986).

There are two types of ore present at the QR deposit: pyritic stockworks in propylitized basalts and disseminated pyrite in massive, propylitized basaltic tuffs. The alteration

assemblage includes variable amounts of pyrite, chlorite, fine-grained disseminated epidote, epodite-rich selvages on pyrite-carbonate veinlets, and thin pyrite-epidote coatings on fractures (Fox et al, 1986).

Fox et al have summarized the events as follows. They are repeated in full, as they could be directly applicable to an understanding of the mineralization on the Doreen property. The three stages are:

- 1. 'Mafic submarine volcanics of shoshonitic (alkalic) composition are deposited from fissure style eruptions. No textural zoning within the basaltic pile is present to indicate any central volcanic center. During waning stages of the mafic phase, a brief volcanic hiatus allows development of shelf-like limestones and calcareous sediments. Remnant heat flow from the mafic volcanics or perhaps the initial development of the central volcanic centers present during the subsequent felsic volcanic phase results in local fumarolic activity. This activity results in pyrite-carbonate alteration of basaltic units near the top of the pile. Pyrite precipitates forming fine-grained framboidal, colloform masses and bedded textures accompanied by sparry calcite cement. Traces of chalcopyrite in this horizon and local beds of massive pyrite suggest that massive sulphide deposits may have formed at this time. Gold is not present at this stage.
- 2. Rapidly rising, differentiating, silica-poor diorite stocks begin to intrude the volcanic pile. Felsic breccias and flows are erupted from central volcanoes. Fragments of the stock and the surrounding basaltic rocks are often taken up in eruptive breccia flows. Felsic rocks quickly grade outward from volcanic centers into distal volcaniclastic and epiclastic equivalents. Possible auriferous exhalative horizons may form at this time within proximal felsic strata.
- 3. Eventually the alkalic stock, now strongly differentiated, intrudes its own volcanic extrusives. Possible caldera collapse provides a plumbing system for a convection system of heated, acidic, oxidizing meteoric and/or magmatic fluids. Gold is taken into solution from the surrounding rock mass or contributed directly from magmatic fluids. When gold- laden solutions encounter the pyrite-carbonate horizon, formed in Stage 1, the strong pH-Eh barrier precipitates gold at the reaction front. Higher in the convective system no favorable host rock is present and the system diffuses into a large, low grade porphyry copper deposit.'

It follows from the above descriptions and models presented that gold exploration in the Quesnel Gold Belt should then focus on semi-conformable, stratabound mineralization hosted by permeable volcaniclastic or sedimentary rocks, preferably calcareous tuffs and siltstones, and developed in propylitic alteration zones about alkalic plugs, stocks and dikes.

Major faults could have played a part in the mineralization, in so far as volcanic centers could be preferentially developed in grabens along a volcanic axis.

# 8.0 2017 EXPLORATION SUMMARY

### 8.1 XRF Analysis Method

A total of 93 soil samples were collected on the Doreen property in 2017. Some sample analyses were done in the field though many samples were collected for cleaning or drying before analysis by XRF.

The soils were sampled from the flanks of logging roads. A shovel was used to recover soil from the B soil horizon from a depth of 15-25cm. Soils were predominantly coarse-grained (coarse grained sand matrix with gravel-cobble sized clasts). A GPS waypoint was taken and marked in a notebook, the locations were flagged with tape (Sample Name – Soils), and any pertinent observations were noted.

The rock and soil samples were analyzed for multiple elements using the Niton XL3t handheld X-ray fluorescence analyzer from Thermo Scientific Inc. Further information on this instrument is at the Niton website <u>http://www.niton.com/en/niton-analyzers-products/xl3/xl3t</u>. An overview of sample analysis using energy dispersive X-ray fluorescence (EDXRF), adapted from the Niton website, is in Appendix B.

#### 8.2 Geochemical Sampling and Results

The soil sampling in 2017 was a continuation of a systematic sampling program started 2014. The purpose is to test areas of evident sulphide mineralization in nearby outcrops. The soil samples were analysed for eighteen elements. The element of primary interest was gold. Zinc and copper were considered to be the best pathfinder elements and thus Au, Zn and Cu results are presented on a map in this report.

Many of the soils were anomalous in zinc and copper, up to 631 and 390 ppm, respectively. In one area, four soils were highly anomalous on molybdenum, up to 757 ppm Mo. Another area nearby had six soils highly anomalous in lead, up to 956 ppm Pb. Two samples were high in gold and weakly anomalous in copper. The results for these are presented below.

XRF No.	Au	Zn	Cu
	ppm	ppm	ppm
4917	9.31	106	125
4960	10.35	106	152

All sample locations and results are in Figure Nos.5 and 6 and Table Nos. 3 and 4.

#### 9.0 CONCLUSIONS

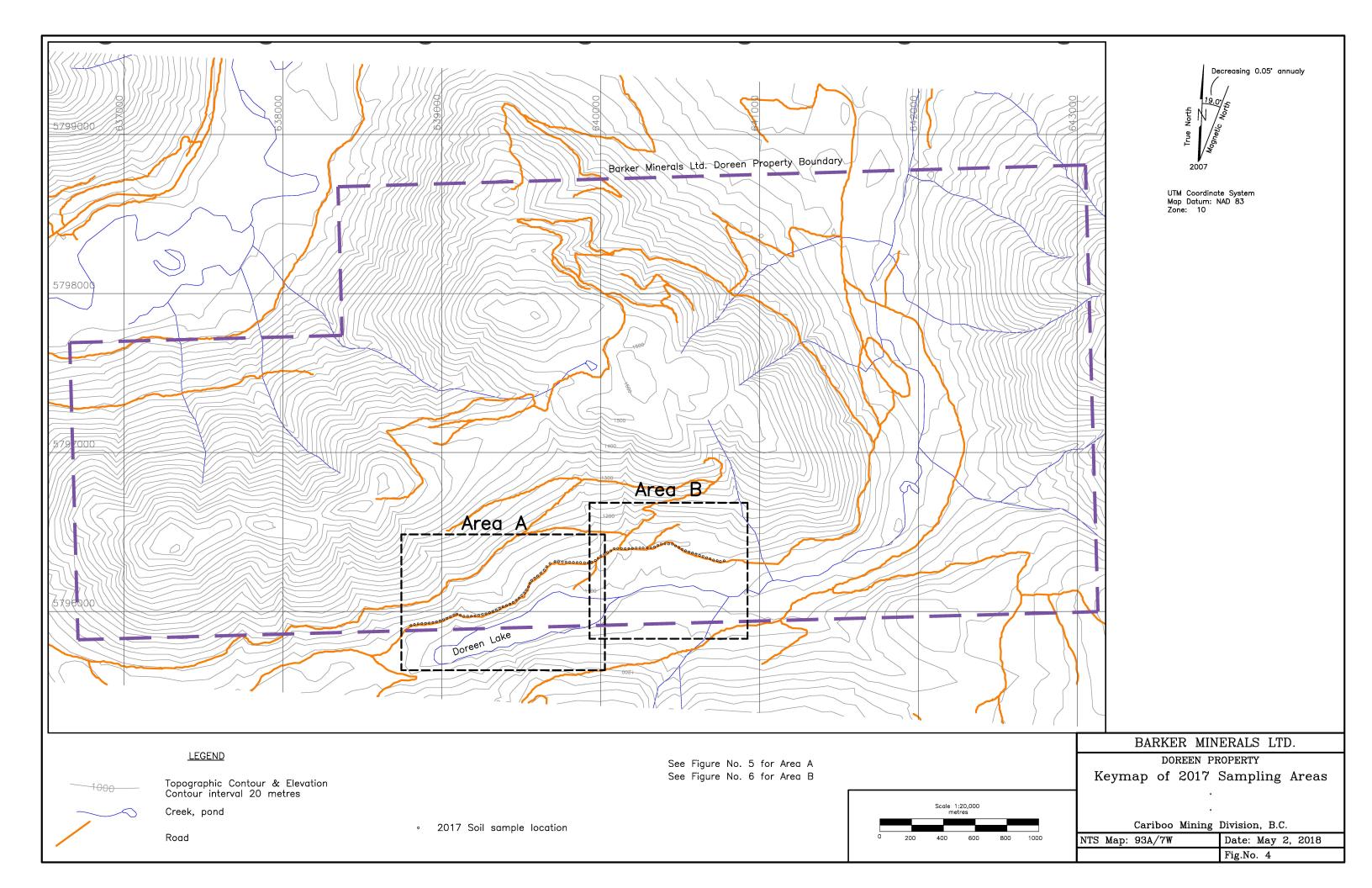
Only two soil samples contained any amount of gold. Thus a correlation of Au with any other element could not be determined from the samples collected, except perhaps with Cu.

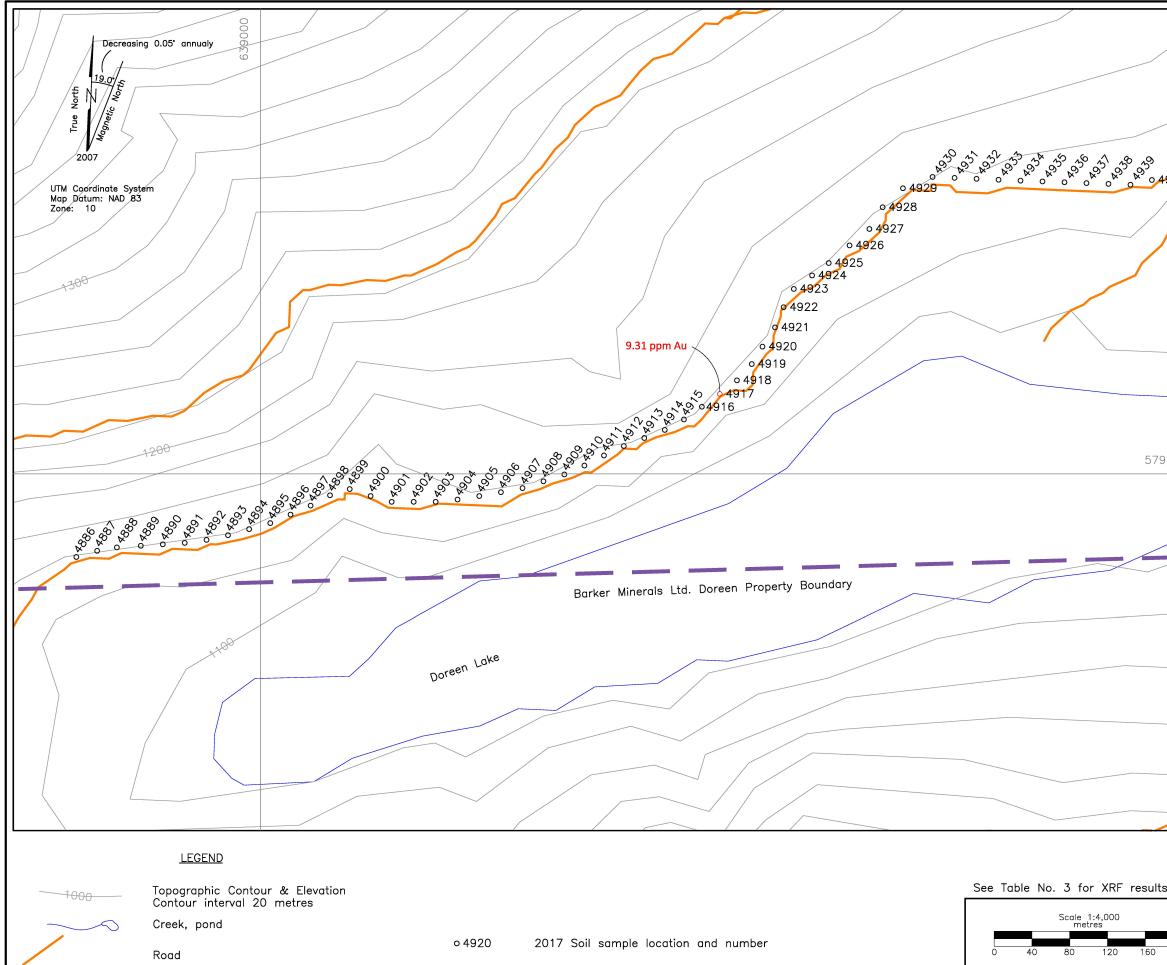
The limited scope of the sampling program does not permit general conclusions. However, follow up of the anomalous geochemistry and continued exploration of the property is warranted.

More extensive and intensive sampling and geological mapping is required in order to follow up these anomalous results and determine the cause of the mineralization.

#### **10.0 RECOMMENDATIONS**

More extensive sampling and mapping is recommended along grid lines.





640009	-	y Area A - (RF No.	Soil S Zn	amples Cu	XRF Results (ppm) Au
49440 49430 04942 4940 796000		4886 4887 4887 4887 4890 4890 4891 4892 4893 4894 4895 4896 4897 4898 4897 4898 4890 4901 4902 4900 4901 4902 4900 4900 4900 4900 4900 4900 4900	146 155 321 258 132 287 334 208 129 164 119 3917 205 1037 206 1037 205 100 205 100 205 100 205 100 205 100 205 100 205 100 205 100 205 100 205 100 205 100 205 100 205 100 205 100 205 100 205 100 205 100 205 100 205 100 205 205 100 205 100 205 100 205 205 100 205 205 205 205 205 205 205 205 205 2	84 122 128 80 94 115 103 53 50 65 89 51 70 85 104 53 50 65 89 51 7124 135 887 6679 917 125 187 19125 187 194 175 186 329 150 169 84 175 175 186 329 117 124 125 109 125 109 125 126 84 175 126 85 91 213	9.31
	Zn results ov Cu results ov	ver 120 ver 100	ppm ppm	marl marl	ked in red.
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	Carit	ooo Min	ing l	Divisio	on, B.C.
) 200	NTS Map: 93A/	7W			May 2, 2018
				Fig.N	0. D

Table No. 3 Doreen Area A - XRF Sampling Results

XHE No.         Pig. Nor.         No.         Vit         No.         Vit         No.         Vit         No.         Vit         No.         Vit         No.         No.        No.        No. <th< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>U</th><th>oreen</th><th>Area A</th><th>- XKF 3</th><th>ampii</th><th>ng Resu</th><th>its</th><th></th><th></th><th></th><th></th><th></th></th<>												U	oreen	Area A	- XKF 3	ampii	ng Resu	its					
4887       Fig 5 / Area A       Soli       perm Der:17-00;       4:00       24       4:00       200	XRF No.	Fig. No./Area	Туре	Units	Field No.	Мо	Zr	Sr	U	Rb	Th	Pb	Se	As	Hg	Au	Zn	W	Cu	Ni	Со	Fe	Mn
4887       Fig 5 / Area A       Soli       perm Der:17-00;       4:00       24       4:00       200	4886	Fig 5 / Area A	Soil	nnm	Dor-s17-00	700	858	186	477		457	<100	. 617			< 100		< 100		<100		<100.	
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4890         Fig 5 / Area A         Soil         ppm Dor-317-12 <lod:< th="">         113         1127 &lt; LOD:         5         6         CDD         100         <t< td=""><td></td><td>-</td><td></td><td>••</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>-</td><td></td><td></td><td></td><td></td><td></td></t<></lod:<>		-		••														-					
4900Fig 5 / Area ASoil ppm Dors17-14Soil 0967 < LOD:535 < LOD < LOD:17 < LOD < LOD:1960 < LOD33885904901Fig 5 / Area ASoil ppm Dors17-14< LOD:117245 < LOD:477 < LOD < LOD:114 < LOD < LOD:23 < LOD:54 < LOD3406714904902Fig 5 / Area ASoil ppm Dors17-15< LOD:155394 < LOD:55 < LOD < LOD100 < LOD:107 < LOD < LOD:107 < LOD < LOD:107 < LOD < LOD107 < LOD < LOD100 < LOD <t< td=""><td></td><td></td><td></td><td>••</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>				••																			
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4903       Fig 5 / Area A       Soil       ppm       Dor-s17-16       < LOD       130       306 < LOD       55 < LOD < LOD       28 < LOD : LOD       157 < LOD       108       44 < LOD       375 5       1368         4904       Fig 5 / Area A       Soil       ppm       Dor-s17-16       < LOD       94       318 < LOD       44       64 < LOD: LOD       107 < LOD: LOD       105 < LOD       104 < T < LOD       955 788         4906       Fig 5 / Area A       Soil       ppm       Dor-s17-18       < LOD       115       376 < LOD       51       5 < LOD: LOD       137 < LOD       107 < LOD		0.1		••																			
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<b>4905</b> Fig 5 / Area ASoilppmDor-s17-17< LOD:134376 < LOD:497 < LOD:25 < LODLOD:130LOD:14047 < LOD:39955788 <b>4906</b> Fig 5 / Area ASoilppmDor-s17-18< LOD:115367 < LOD:515 < LOD:100 < LOD:103LOD:11780 < LOD:4322745 <b>4907</b> Fig 5 / Area ASoilppmDor-s17-12< LOD:76607 < LOD:515 < LOD:100 < LOD:132LOD:12497 < LOD:53370901 <b>4909</b> Fig 5 / Area ASoilppmDor-s17-22< LOD:64433 < LOD:166 < LOD:100 < LOD:134 < LOD132LOD:134 < LOD:134 < LOD:1		-		••																			
4906       Fig S / Area A       Soil       ppm       Dor-s17-18       < LOD:       115       367 < LOD:       51       S < LOD<       LOD       17 < LOD:       CLOD:       17 < LOD:       Soil       ppm       Dor-s17-19       CLOD:       17 < LOD:       Soil       Soil       ppm       Dor-s17-20       CLOD:       Soil       ppm       Dor-s17-23       CLOD:       64       483 < LOD:       61       6 < LOD       LOD:       13 < LOD       13 < LO				••																			
4907       Fig 5 / Area A       Soil       ppm       Dor:s17:19 <lod:< th="">       173       356 &lt; LOD:       51       8 &lt; LOD:<lod< th="">       48 &lt; LOD:<lod< th="">       117       80 &lt; LOD       45382       745         4908       Fig 5 / Area A       Soil       ppm       Dor:s17:21       <lod:< th="">       66       67 &lt; LOD:       53       5 &lt; LOD&lt;<lod< th="">       134       CLOD:       124       97 &lt; LOD       53370       901         4909       Fig 5 / Area A       Soil       ppm       Dor:s17:23       <lod:< th="">       84       371 &lt; LOD:       14 &lt; LOD       133 &lt; LOD:       140       134 &lt; LOD:       134 &lt; LOD:       135       76 &lt; LOD       3368       697         4911       Fig 5 / Area A       Soil       ppm       Dor:s17:25       <lod:< th="">       147       318 &lt; LOD:       44 &lt; LOD       LOD &lt; LOD       LOD:       105       CLOD       87       S &lt; LOD       3368       697         4913       Fig 5 / Area A       Soil       ppm       Dor:s17:25       <lod:< th="">       89       368 &lt; LOD:       50 &lt; LOD &lt; LOD       101 &lt; LOD       105       CLOD       105       CLOD       105       CLOD       105       CLOD       105       CLOD       105       CLOD       106       107</lod:<></lod:<></lod:<></lod<></lod:<></lod<></lod<></lod:<>		-		••																			
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4911       Fig 5 / Area A       Soil       ppm       Dor-s17-24       5       147       318 < LOD:       48       7 < LOD: <lod:< th="">       20 &lt; LOD: <lod:< th="">       95 &lt; LOD       87       58 &lt; LOD:       33368       697         4912       Fig 5 / Area A       Soil       ppm       Dor-s17-25       <lod:< th="">       143       307 &lt; LOD:       44 &lt; LOD &lt; LOD:       100 &lt; LOD:       105 &lt; LOD       205 &lt; LOD:       287       66 &lt; LOD:       29864       631         4914       Fig 5 / Area A       Soil       ppm       Dor-s17-27       <lod:< th="">       89       368 &lt; LOD:       50 &lt; LOD &lt; LOD:       100 &lt; LOD:       217 &lt; CLOD:       70       66 &lt; LOD:       48091       118         4915       Fig 5 / Area A       Soil       ppm       Dor-s17-28       <lod:< th="">       116       425 &lt; LOD:       51 &lt; LOD &lt; LOD:       410 &lt; LOD:       100 &lt; LOD:       101        102 &lt; LOD &lt; LOD:       102 &lt; LOD       101        426 &lt; LOD:       55 &lt; LOD:       44 &lt; LOD &lt; LOD:       100 &lt; LOD:       100 &lt; LOD:       101        425 &lt; LOD:       56 &lt; LOD:       44 &lt; LOD &lt; LOD:       100 &lt; LOD:       101        420 &lt; LOD:       501        400 &lt; LOD:       101        53 &lt; LOD:       401 &lt; LOD:       400 &lt; LOD:       101        514 &lt; LOD:       410 &lt; LOD:</lod:<></lod:<></lod:<></lod:<></lod:<>				••																			
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4913Fig 5 / Area ASoilppmDor-s17-26< LOD:96357 < LOD:44 < LOD < LOD:100 < LOD:217 < LOD:7966 < LOD4809911154914Fig 5 / Area ASoilppmDor-s17-27< LOD:		-		••																			
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4916Fig 5 / Area ASoilppmDor-s17-29< LOD:70347 < LOD:416 < LOD:< LOD:72 < LOD:CLOD:214 < LOD:119 < LOD:< CLOD:5019410244917Fig 5 / Area ASoilppmDor-s17-30< LOD:954089475 < LOD:< LOD:40 < LOD:9.31106 < LOD:12549 < LOD:31836404918Fig 5 / Area ASoilppmDor-s17-31< LOD:88556 < LOD:44 < LOD < LOD:11 < LOD:< LOD:108 < LOD:13736 < LOD47119554919Fig 5 / Area ASoilppmDor-s17-32< LOD:59646 < LOD:505 < LOD: <lod:< th="">8 &lt; LOD:<lod:< th="">102 &lt; LOD:103104 &lt; LOD:111 &lt; LOD:102 &lt; LOD:10333 &lt; CLOD441 &lt; tLOD:5110111 &lt; LD:4920Fig 5 / Area ASoilppmDor-s17-33&lt; LOD:102402 &lt; LOD:36 &lt; LOD:<lod:< th="">30 &lt; LOD:<lod:< th="">102 &lt; LOD:10383 &lt; LOD:347 &lt; 7814921Fig 5 / Area ASoilppmDor-s17-34&lt; LOD:102402 &lt; LOD:36 &lt; LOD:<lod:< th="">102 &lt; LOD:102 &lt; LOD:10383 &lt; LOD:30 &lt; LOD:<lod:< th="">102 &lt; LOD:104 &lt; LOD:412 &lt; LOD:414 &lt; LOD:4</lod:<></lod:<></lod:<></lod:<></lod:<></lod:<>		-																					
4917Fig 5 / Area ASoilppmDor-s17-30< LOD:954089475 < LOD:40 < LOD:9.31106< LOD12549 < LOD:381836404918Fig 5 / Area ASoilppmDor-s17-31< LOD:88556 < LOD:44 < LOD:LOD:11 < LOD:LOD:108< LOD:18736 < LOD:414 < LOD:5511012154919Fig 5 / Area ASoilppmDor-s17-32< LOD:59646 < LOD:505 < LOD:30 < LOD:102LOD:139336 < LOD:1114920Fig 5 / Area ASoilppmDor-s17-33< LOD:102402 < LOD:30 < LOD:102 < LOD:102 < LOD13983 < LOD:344797814921Fig 5 / Area ASoilppmDor-s17-34< LOD:102402 < LOD:36 < LOD:102 < LOD:102 < LOD:467 < LOD:102 < LOD:102 < LOD17590 < LOD:416258814922Fig 5 / Area ASoilppmDor-s17-36< LOD:101514 < LOD:437 < LOD:102 < LOD:102 < LOD:86 < LOD17590 < LOD:42027814923Fig 5 / Area ASoilppmDor-s17-37< LOD:101514 < LOD:437 < LOD:102 < LOD:86 < LOD:10383 < LOD:36 < LOD:102 < LOD:46 < LOD:400 < LOD:404 < LOD:86 < LOD:102402 < LOD:410 < LOD:<		-		• •																			
4918Fig 5 / Area ASoilppmDor-s17-31< LOD:88556 < LOD:44 < LOD < LOD: < LOD:11 < LOD: < LOD:108< LOD:18736 < LOD:474119554919Fig 5 / Area ASoilppmDor-s17-32< LOD:59646 < LOD:505 < LOD: < LOD:8 < LOD: < LOD:87 < LOD:19441 < LOD:5511012154920Fig 5 / Area ASoilppmDor-s17-33< LOD:13937510467 < LOD:100 < LOD:1022 LOD:13983 < LOD:384797814921Fig 5 / Area ASoilppmDor-s17-34< LOD:102402 < LOD:36 < LODLOD:102 < LOD:102 < LOD:102 < LOD:416258814922Fig 5 / Area ASoilppmDor-s17-35< LOD:101514 < LOD:434 < LOD:102 < LOD:102 < LOD:102 < LOD:46 < 7 < LOD:102 < LOD:102 < LOD:46 < COD:47119554923Fig 5 / Area ASoilppmDor-s17-35< LOD:101514 < LOD:439 < LOD:11 < LOD:102 < LOD:86 < LOD:179101 < LOD:462018414923Fig 5 / Area ASoilppmDor-s17-37< LOD:101543 < LOD:389 < LOD:102 < LOD:102 < LOD:86 < LOD:179101 < LOD:640 < LOD:4704924Fig 5 / Area ASoilppmDor-s17-37< LOD: <t< td=""><td></td><td></td><td></td><td>••</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>				••																			
4919       Fig 5 / Area A       Soil       ppm       Dor-s17-32       < LOD:       59       646 < LOD:       50       5 < LOD < LOD       8 < LOD: < LOD       87 < LOD       194       41 < LOD:       55110       1215         4920       Fig 5 / Area A       Soil       ppm       Dor-s17-33       < LOD:       139       375       10       46       7 < LOD:       30 < LOD:       102 <lod:< th="">       139       83 &lt; LOD:       38479       781         4921       Fig 5 / Area A       Soil       ppm       Dor-s17-34       &lt; LOD:       102       402 &lt; LOD:       36 &lt; LOD &lt; LOD &lt; LOD:       102       2 &lt; LOD:       402       83 &lt; LOD:       402       83 &lt; LOD:       402       80       90       LOD:       402       80       90       LOD:       402       80       2 &lt; LOD:       400       400       400       400       400       400       400       400       400       400       41       400       4</lod:<>		- · ·		••																			
4920       Fig 5 / Area A       Soil       ppm       Dor-s17-33       < LOD:		-																					
4921       Fig 5 / Area A       Soil ppm Dor-s17-34       < LOD: 102		-		••																			
4922       Fig 5 / Area A       Soil       ppm       Dor-s17-35       < LOD:		-		••																			
4923       Fig 5 / Area A       Soil       ppm       Dor-s17-36       < LOD:		0		• •																			
4924       Fig 5 / Area A       Soil       ppm       Dor-s17-37       < LOD:				• •																			
4925       Fig 5 / Area A       Soil       ppm       Dor-s17-38       < LOD:		-		••																			
4926       Fig 5 / Area A       Soil       ppm       Dor-s17-39       < LOD:		-		••																			
4927       Fig 5 / Area A       Soil       ppm       Dor-s17-40       < LOD:		-		• •																			
4928       Fig 5 / Area A       Soil       ppm       Dor-s17-41       < LOD:		-		••																			
4929       Fig 5 / Area A       Soil       ppm       Dor-s17-42       < LOD:		- · ·																					
4930       Fig 5 / Area A       Soil       ppm       Dor-s17-43       < LOD:		-		• •																			
4931         Fig 5 / Area A         Soil         ppm         Dor-s17-44         < LOD:         117         433 < LOD:         51         6 < LOD:         LOD:         10 < LOD:         137         < LOD:         118         56 < LOD:         41095         740		-		••																			
		-		••																			
4932 Fig 5 / Area A Soil ppm Dor-s17-45 < LOD: 101 388 < LOD: 54 8 < LOD: < LOD: 13 < LOD: < LOD: 119 < LOD: 220 50 < LOD: 47426 1109		- · ·		••																			
	4932	Fig 5 / Area A	Soil	ppm	Dor-s1/-45	< LOD :	101	388	< LOD :	54	8	< LOD	: < LOD	13	< LOD	< LOD	119	< LOD :	220	50	< LOD :	47426	1109

D:.	Values for Zn above 120 ppm are coloured red.
24	Values for Cu, Pb, Mo above 100 ppm are coloured red.
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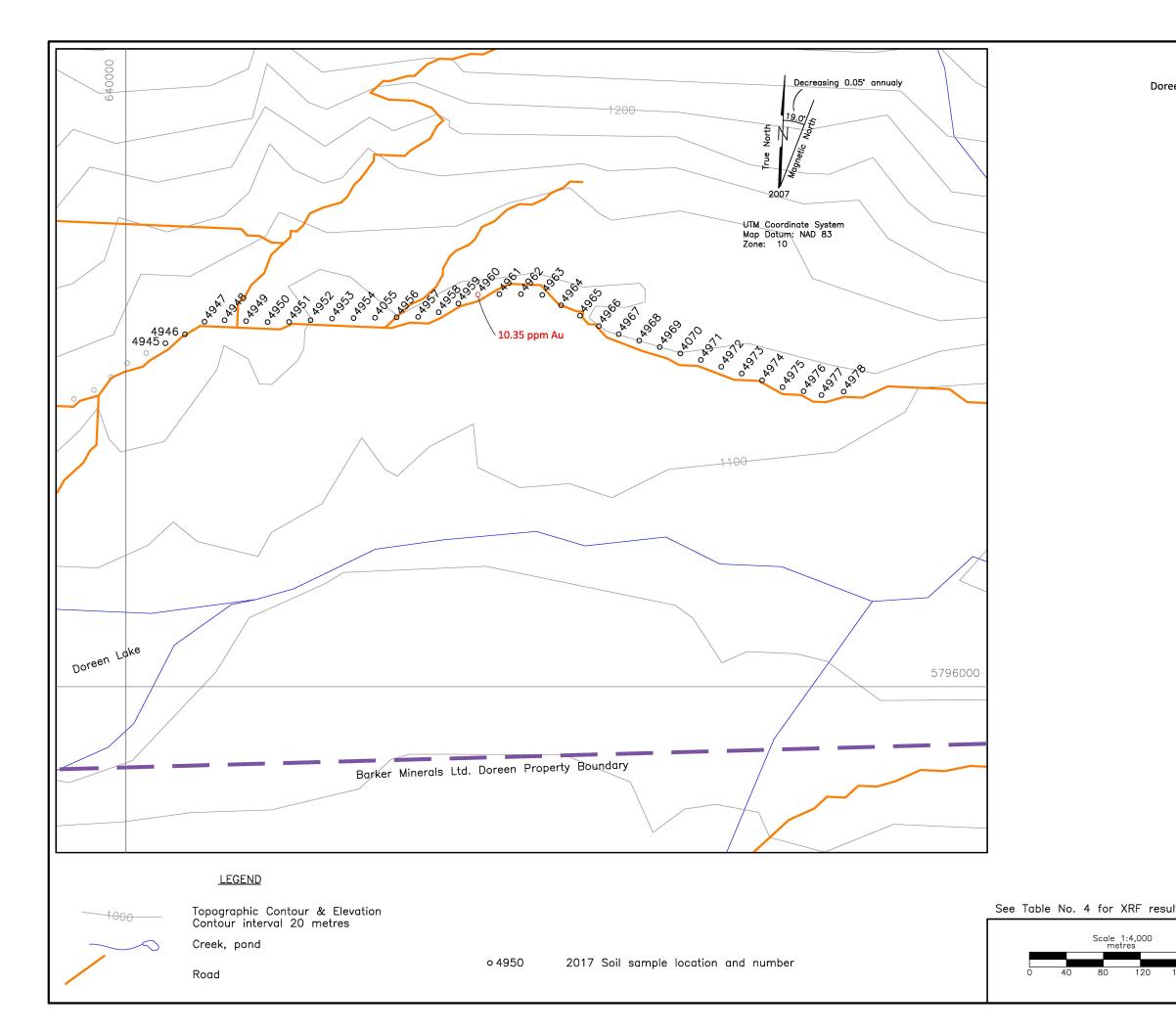
Table No. 3 Doreen Area A - XRF Sampling Results

XRF No.	Fig. No./Area	Туре	Units	Field No.	Mo	Zr	Sr	U	Rb	Th	Pb	Se	As	Hg	Au	Zn	W	Cu	Ni	Со	Fe	Mn
4933	Fig 5 / Area A	Soil	ppm	Dor-s17-46	< LOD :	145	422	13	42	6	< LOD :-	< LOD :	12	< LOD	: < LOD :	105	< LOD	224	39	< LOD :	47044	880
4934	Fig 5 / Area A	Soil	ppm	Dor-s17-47	< LOD :	148	409 <	< LOD :	47	8	< LOD :-	< LOD :	21	< LOD	< LOD	94	< LOD	390	60	< LOD :	47292	963
4935	Fig 5 / Area A	Soil	ppm	Dor-s17-48	5	107	476 •	< LOD :	53 ·	< LOD :	< LOD :-	< LOD :	9	< LOD	< LOD :	106	< LOD	117	< LOD :	< LOD :	45613	918
4936	Fig 5 / Area A	Soil	ppm	Dor-s17-49	< LOD :	121	377 •	< LOD :	46	6	< LOD :-	< LOD :	20	< LOD	< LOD :	141	< LOD	216	57	< LOD :	47442	2165
4937	Fig 5 / Area A	Soil	ppm	Dor-s17-50	< LOD :	132	325 •	< LOD :	56	6	< LOD :-	< LOD :	22	< LOD	< LOD :	165	< LOD	86	< LOD :	< LOD :	41897	686
4938	Fig 5 / Area A	Soil	ppm	Dor-s17-51	< LOD :	134	229 -	< LOD :	37 •	< LOD :	< LOD :-	< LOD :	17	< LOD	< LOD :	88	< LOD	56	< LOD :	< LOD :	26909	363
4939	Fig 5 / Area A	Soil	ppm	Dor-s17-52	< LOD :	141	286 •	< LOD :	51	8	< LOD :-	< LOD :	24	< LOD	< LOD :	104	< LOD	91	69	< LOD :	35882	572
4940	Fig 5 / Area A	Soil	ppm	Dor-s17-53	4	115	444 <	< LOD :	50	5	< LOD :-	< LOD :	18	< LOD	< LOD :	130	< LOD	213	56	< LOD :	46914	642
4941	Fig 5 / Area A	Soil	ppm	Dor-s17-54	725	1005	249	428 •	< LOD :	330	< LOD :	490	< LOD :	< LOD	< LOD :	< LOD :	< LOD	< LOD :	< LOD :	< LOD :	< LOD : ( ·	< LOD : .
4942	Fig 5 / Area A	Soil	ppm	Dor-s17-54	628	840	209	439 -	< LOD :	280	< LOD :	477	< LOD :	< LOD	< LOD :	< LOD :	< LOD	< LOD :	< LOD :	< LOD :	< LOD : 4 ·	< LOD : .
4943	Fig 5 / Area A	Soil	ppm	Dor-s17-54	651	707	307 •	< LOD : •	< LOD :	248	< LOD :	638	< LOD :	< LOD	< LOD :	< LOD :	< LOD	< LOD :	< LOD :	< LOD :	< LOD : : ·	< LOD : .
4944	Fig 5 / Area A	Soil	ppm	Dor-s17-55	757	901	180	412 •	< LOD :	512	< LOD :	326	< LOD :	< LOD	< LOD :	631	< LOD	< LOD :	< LOD :	< LOD :	< LOD : ( ·	< LOD : .

In all cases <LOD means below level of detection.

Values for certain elements above 100 ppm are coloured red.

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XRF No.	Zn	Cu	Au
4945 4946 4947 4948 4950 4951 4952 4953 4954 4955 4956 4957 4958 4959 4960 4961 4962 4963 4964 4965 4966 4967 4968 4969 4969 4969 4970 4971 4972 4973 4974 4975 4976	217 205 164 274 255 188 115 177 106 201 146 233 177 153 131 169 176 114 103 213 133 133 133 133 133 146 229	193 118 147 41 1299 85 36 47 101 152 92 111 238 80 101 50 45 627 148 69 92 241 118 132 116 186	10.35

Doreen Property Area B - Soil Samples XRF Results (ppm)

Results below level of detction are not shown. Zn results over 120 ppm marked in red. Cu results over 100 ppm marked in red.

	BARKER MINERALS LTD.								
	DOREEN PROPERTY								
ults.	Area B Sempling Leastions								
	Sampling Locations								
	& Zn, Cu, Au Geochemistry (ppm)								
	Cariboo Mining Division, B.C.								
160 200	NTS Map: 93A/7W Date: May 2, 2018								
	Fig.No. 6								

Table No. 4 Doreen Area B - XRF Sampling Results

												icen	/ iicu D		ampi	ing nest	1105						
XRF No.	Fig. No./Area	Туре	Units	Field No.	. Mo	Zr	Sr	U	Rb	Th	Pb	Se	As	Hg	Au	Zn	W	Cu	Ni	Со	Fe	Mn	
4945	Fig 6 / Area B	Soil	•••	Dor-s17-56		< LOD :		< LOD : <													< LOD : 4		V
4946	Fig 6 / Area B	Soil	••	Dor-s17-57	< LOD : •			< LOD : <													< LOD : (		V
4947	Fig 6 / Area B	Soil	••	Dor-s17-58	< LOD : •	-		< LOD : <													< LOD : (		
4948	Fig 6 / Area B	Soil	••	Dor-s17-59	< LOD : •		85	169 <													< LOD : 4		
4949	Fig 6 / Area B	Soil	••	Dor-s17-60	< LOD : •	-		< LOD : <													< LOD : (		
4950	Fig 6 / Area B	Soil	••	Dor-s17-61	< LOD : •		74	109 <													< LOD : 4		
4951	Fig 6 / Area B	Soil	••	Dor-s17-62	< LOD :			< LOD :	53		LOD:			< LOD				193				1025	
4952	Fig 6 / Area B	Soil	••	Dor-s17-63	< LOD :	88		< LOD :	59		LOD:			< LOD			< LOD				57120		
4953	Fig 6 / Area B Fig 6 / Area B	Soil	••	Dor-s17-64	< LOD :	95		< LOD :		< LOD : <	-	-		< LOD			< LOD				51631		
4954 4955	Fig 6 / Area B	Soil Soil	••	Dor-s17-65 Dor-s17-66	< LOD : 5	94 113		< LOD : < LOD :	52 62	>: LOD >	LOD : «			< LOD < LOD			< LOD < LOD				44960 64864	1516 986	
4955	Fig 6 / Area B	Soil	•••	Dor-s17-67	< LOD :			< LOD :	57		< LOD : •			< LOD			< LOD				44607	950 950	
4957	Fig 6 / Area B	Soil	••	Dor-s17-68	< LOD :			< LOD :	48		< LOD : •			< LOD			< LOD				32307	649	
4958	Fig 6 / Area B	Soil	••	Dor-s17-69	< LOD :			< LOD :	44		LOD :			< LOD			< LOD				37597	674	
4959	Fig 6 / Area B	Soil	••	Dor-s17-70	7	99		< LOD :	48		LOD :			< LOD			< LOD				57387	925	
4960	Fig 6 / Area B	Soil	••	Dor-s17-71	< LOD :			< LOD :	54	_	LOD :	-	-	< LOD			< LOD			< LOD		852	
4961	Fig 6 / Area B	Soil	••	Dor-s17-72	< LOD :			< LOD :	51	-	LOD :	-		< LOD			< LOD			< LOD		1440	
4962	Fig 6 / Area B	Soil	••	Dor-s17-73	< LOD :			< LOD :	55		LOD :			< LOD			< LOD				54079		
4963	Fig 6 / Area B	Soil	•••	Dor-s17-74	6	85		< LOD :		< LOD : <				< LOD			< LOD						
4964	Fig 6 / Area B	Soil	••	Dor-s17-75	< LOD :	92		< LOD :	56	5 <	LOD :	< LOD	13	< LOD	< LOD	177	< LOD	: 88	41	< LOD	45138	1777	
4965	Fig 6 / Area B	Soil	ppm	Dor-s17-76	< LOD :	110	358 <	< LOD :	51	< LOD : <	LOD :	< LOD	14	< LOD	< LOD	153	< LOD	101	< LOD	< LOD	45299	989	
4966	Fig 6 / Area B	Soil	ppm	Dor-s17-77	< LOD :	233	253 <	< LOD :	39	4 <	LOD :	< LOD	34	< LOD	< LOD	131	< LOD	: 50	70	< LOD	41678	814	
4967	Fig 6 / Area B	Soil	ppm	Dor-s17-78	< LOD :	185	201 <	< LOD :	69	< LOD : <	LOD :	< LOD	39	< LOD	< LOD	169	< LOD	42	< LOD	< LOD	38873	544	
4968	Fig 6 / Area B	Soil	ppm	Dor-s17-79	7	153	289 <	< LOD :	51	< LOD : <	LOD :	< LOD	21	< LOD	< LOD	176	< LOD	50	< LOD	< LOD	37680	651	
4969	Fig 6 / Area B	Soil	ppm	Dor-s17-80	< LOD :	130	231 <	< LOD :	38	9 <	LOD :	< LOD	21	< LOD	< LOD	114	< LOD	: 45	< LOD	< LOD	29542	515	
4970	Fig 6 / Area B	Soil	ppm	Dor-s17-54a	< LOD :	78	645 <	< LOD :	40	10 <	LOD :	< LOD	16	< LOD	< LOD	103	< LOD	627	90	< LOD	75781	1523	
4971	Fig 6 / Area B	Soil	ppm	Dor-s17-55a	< LOD :	120	439 <	< LOD :	57	< LOD : <	LOD :	< LOD	13	< LOD	< LOD	213	< LOD	: 148	66	< LOD	59988	833	
4972	Fig 6 / Area B	Soil	ppm	Dor-s17-56a	< LOD :	85	324 <	< LOD :	50	< LOD :	10 •	< LOD	< LOD	< LOD	< LOD	133	< LOD	: 69	< LOD	< LOD	38183	718	
4973	Fig 6 / Area B	Soil	ppm	Dor-s17-57a	< LOD :	36	179 <	< LOD :	27	< LOD :	123 •	< LOD	< LOD	< LOD	< LOD	85	< LOD	92	< LOD	< LOD	26471	435	
4974	Fig 6 / Area B	Soil	ppm	Dor-s17-58a	5	125	321 <	< LOD :	48	7 <	LOD :	< LOD	15	< LOD	< LOD	120	< LOD	241	62	< LOD	36976	916	
4975	Fig 6 / Area B	Soil	ppm	Dor-s17-59a	< LOD :	87	354 <	< LOD :	46	5 <	LOD :	< LOD	10	< LOD	< LOD	153	< LOD	118	41	< LOD	43669	892	
4976	Fig 6 / Area B	Soil	ppm	Dor-s17-60a	5	94	370 <	< LOD :	50	5 <	LOD :	< LOD	16	< LOD	< LOD	149	< LOD	132	47	< LOD	47617	1050	
4977	Fig 6 / Area B	Soil	ppm	Dor-s17-61a	< LOD :	97	387 <	< LOD :	52	6 <	LOD :	< LOD	17	< LOD	< LOD	146	< LOD	116	73	< LOD	48030	1101	
4978	Fig 6 / Area B	Soil	ppm	Dor-s17-62a	< LOD :	114	351 <	< LOD :	54	8 <	LOD :	< LOD	13	< LOD	< LOD	229	< LOD	186	86	< LOD	55279	1048	

In all cases <LOD means below level of detection.

11	Values for Zn above 120 ppm are coloured red.
25	Values for Cu, Pb, Mo above 100 ppm are coloured red.
09	
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### APPENDIX A

**Glossary of Technical Terms and Abbreviations** 

Anomalous	Chemical and mineralogical changes and higher than typical background values in elements in a rock resulting from reaction with hydrothermal fluids or increase in pressure or temperature.						
Anomaly	The geographical area corresponding to anomalous geochemical or geophysical values.						
Argentiferous	Containing silver.						
Background	The typical concentration of an element or geophysical response in an area, generally referring to values below some threshold level, above which values are designated as anomalous.						
BBE	Black Bear East property.						
BCGS	British Columbia Geological Survey.						
B.C. MEMPR	British Columbia Ministry of energy Mines and Petroleum Resources.						
cm	Centimetre.						
Cratonic	Pertaining to a craton, an old part of the continental crust, generally making						
up	the interior portion of a continent such as North America.						
DCIP	An electrical method which uses the injection of current and the measurement of voltage and its rate of decay to determine the subsurface resistivity and chargeability.						
DDH	Diamond drill hole.						
eg.	exemplī grātiā (for the sake of example).						
EM	Electromagnetic.						
E-W	East-West.						
Float	Loose rocks or boulders; the location of the bedrock source is not known.						
GBC	Geoscience BC.						
GSC	Geological Survey of Canada.						
Grab sample	A sample of a single rock or selected rock chips collected from within a restricted area of interest.						

g/t	Grams per tonne (metric tonne). 34.29 g/t (metric tonnes) = 1.00 oz/T (short tons).					
На	Hectare - an area totalling 10,000 square metres, e.g., an area 100 metres by 100 metres.					
HLEM	Horizontal loop electromagnetic.					
IP	Induced polarization.					
km	Kilometre.					
lb.	Pound.					
Leucocratic	Light-coloured.					
m	Metre.					
Max-Min	An HLEM technique to test for resistivity and conductivity of rocks.					
МТ	Magnetotelluric. A electrical method that uses natural variations in the Earth's magnetic field to induce electric current in the ground to determine the subsurface resistivity.					
my	Million years.					
NE-SW	Northeast-Southwest.					
NNW-SSE	North northwest – South southeast.					
NW	Northwest.					
NW-SE	Northwest - Southeast.					
N-S	North-South.					
OF	Open File.					
oz.	Ounce.					
oz/T	ounces per ton (Imperial measurement). 34.29 g/t (metric tonnes) = 1.00 oz/T (short tons).					
oz/st	ounces per short ton (Imperial measurement, same as oz/T). 34.29 g/t (metric tonnes) = 1.00 oz/st (short tons).					

ppb	Parts per billion.				
ppm	Parts per million (1 ppm = $1,000$ ppb = $1 \text{ g/t}$ ).				
Protolith	The original rock before it was metamorphosed.				
QUEST	EST Quesnellia Exploration Strategy, a BCGS geophysical survey.				
Sedex	Sedimentary-exhalative mineral deposit type.				
SE	Southeast.				
Tholeiitic	A type of basalt. The most common volcanic rocks on Earth, produced by submarine volcanism at mid-ocean ridges and make up much of the ocean crust. Chemically, these basalts have been described as subalkaline, that is, they contain less (Na <sub>2</sub> O plus K <sub>2</sub> O) at similar SiO <sub>2</sub> than alkali basalt.				
TRIM	Terrain Resource Information Management, series of 1:20,000 scale maps.				
VLF	Very low frequency.				
VLF-EM	Very low frequency electromagnetic.				
VMS	Volcanic-related massive sulphide.				
XRF	X-ray florescence.				

Chemical abbreviations are often used for the elements discussed. Elements and their abbreviations are:

Ag	Silver	Cd	Cadmium	K	Potassium
As	Arsenic	Со	Cobalt	Pb	Lead
Au	Gold	Cr	Chromium	Sb	Antimony
Ва	Barium	Cu	Copper	Sn	Tin
Bi	Bismuth	Fe	Iron	Zn	Zinc

### APPENDIX B

Analytical Method

#### ANALYTICAL METHOD

#### <u>Overview of sample analysis using energy dispersive X-ray fluorescenc</u> using the Thermo Scientific Niton XL3t handheld XRF analyzer

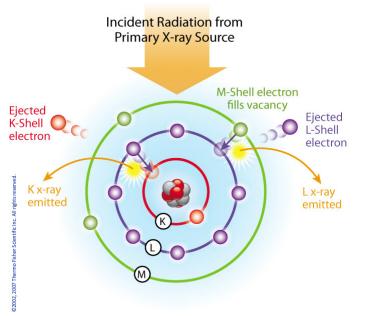
Thermo Scientific portable energy-dispersive x-ray fluorescence (EDXRF) analyzers, commonly known as XRF analyzers, can quickly and nondestructively determine the elemental composition of metal and precious metal samples of rocks, ore and soil.

Up to 40 elements may be analyzed simultaneously by measuring the characteristic fluorescence x-rays emitted by a sample. XRF analyzers can quantify elements ranging from magnesium (Mg - element 12) through uranium (U - element 92) and measure x-ray energies from 1.25 keV up to 85 keV in the case of Pb K-shell fluorescent x-rays excited with a <sup>109</sup>Cd isotope. These instruments also measure the elastic (Raleigh) and inelastic (Compton) scatter x-rays emitted by the sample during each measurement to determine, among other things, the approximate density and percentage of the light elements in the sample.

#### Elemental Analysis - A Unique Set of Fingerprints

How does XRF work? Each of the elements present in a sample produces a unique set of characteristic x-rays that is a "fingerprint" for that specific element. XRF analyzers determine the chemistry of a sample by measuring the spectrum of the characteristic x-ray emitted by the different elements in the sample when it is illuminated by x-rays. These x-rays are emitted either from a miniaturized x-ray tube, or from a small, sealed capsule of radioactive material.

- 1. A fluorescent x-ray is created when an x-ray of sufficient energy strikes an atom in the sample, dislodging an electron from one of the atom's inner orbital shells.
- 2. The atom regains stability, filling the vacancy left in the inner orbital shell with an electron from one of the atom's higher energy orbital shells.
- 3. The electron drops to the lower energy state by releasing a fluorescent x-ray, and the energy of this x-ray is equal to the specific difference in energy between two quantum states of the electron.



Atom emits characteristic X-rays when illuminated by x-rays from a primary source.

When a sample is measured using XRF, each element present in the sample emits its own unique fluorescent x-ray energy spectrum. By simultaneously measuring the fluorescent x-rays emitted by the different elements in the sample, the Thermo Scientific portable XRF analyzers can rapidly determine those elements present in the sample and their relative concentrations - in other words, the elemental chemistry of the sample.



Overview of the Thermo Scientific Niton XL3t handheld XRF analyzer.

APPENDIX C

REFERENCES

Baerg, R.J. and Bradish, L., 1984, Geological, Geochemical, Geophysical, Diamond Drilling Report on the Doreen Lake Property, Assessment Report 13172.

Barker G.E., 1991, Diamond Drill Report on the Dor Claim Group, Assessment Report 21291.

Barker G.E. and Bysouth G, 1990, Diamond Drill Report on the Dor Dor Claim Group, Assessment Report 19551.

B.C Ministry of Mines, G.E.M., 1974; page 239.

Belik, G.D., 1981; Geochemical Report on the Dor Claims, Assessment Report 10118.

Belik, G.D., 1982, Summary Report on the Dor claims, for Eureka Resources Inc.

Belik, G.D., 1984, Summary report on the Dor claims, for Eureka Resources, Inc.

Campbell, K.V., 1988, Report on the Geology and Proposal for Exploration of the Doreen Lake Property, Assessment Report 17089.

Campbell, R.B., 1978, Geological Map, Quesnay Lake, Geological Survey of Canada, Open File 574.

Crone. J.D., 1985, Letter reviewing geophysical surveys over the Dor claim group, for Eureka Resources, Inc., dated May 27, 1985.

Doyle, L.E., 2010, Physical & Geochemical Work on the Dorfly Project, Assessment Report 61633.

Doyle, L.E., 2013, Geological & Geochemical Work Assessment Report on the Doreen Project, Assessment Report 33621.

Fox, P.E., Cameron, R.S., Hoffman, S.J., 1986; Geology and soil geochemistry of the Quesnay River gold deposit, British Columbia, Proceedings, The Association of Exploration Geochemists and The Cordilleran Section, Geological Association of Canada, Vancouver, May, 1986, p.61-71.

Kerr, J.R., 1983, Geochemical and Geological Report on the Dor Claims, Assessment Report 11905.

Leishman, D.A., 1984, Summary report on the Dor claims, for Eureka Resources, Inc., 18 pp.

Leishman, D.A., 1985, Summary report on the Dor claims, for Eureka Resources, Inc., 14 pp.

Leishman, D.A., 1988, Geological and Trenching Report on the Dor Claims, Assessment Report 17905.

Panteleyev, A., 1987, Quesnay gold belt – alkalic volcanic terrane between Horsefly and Quesnay Lakes, B.C. Ministry of Energy, Mines and Petroleum Resources, Geological Fieldwork, 1986, Paper 1987-1, p. 125-133.

Saleken, L.W., Simpson, R.G., 1984, Cariboo – Quesnay gold belt: a geological overview, Western Miner, April 1984, p. 15-20.

Turna, R., 2015, Geological & Geochemical Assessment Report on the Doreen Project, Assessment Report 35244.

Turna, R., 2016, Geological & Geochemical Assessment Report on the Doreen Property, Assessment Report 36035.

Wells R.A., 1984, Assessment Report on the HFR Group of Mineral Claims in the Cariboo Mining Division, Assessment Report 13339.

#### APPENDIX D

#### STATEMENT of AUTHOR'S QUALIFICATIONS

#### **Statement of Author's Qualifications**

I, Rein Turna, of the City of West Vancouver, British Columbia, hereby certify that:

- 1. I am Vice President of Exploration of Barker Minerals Ltd.
- 2. I am a graduate of the University of British Columbia with a B.Sc. in Geological Sciences granted in 1975.
- I am a registered member of the Professional Engineers and Geoscientists of British Columbia.
- 4. I have worked as a geologist in British Columbia, Saskatchewan, Ontario, Yukon and Northwest Territories in Canada since 1975.

R. Turna May 2, 2018

#### APPENDIX E

#### STATEMENT of EXPENDITURES

# Barker Minerals Ltd.

### Work was completed between October 20, 2017 to December 13, 2017

#### Work was done on claim # 1055620

#### Event # 5677470

# Doreen Property - Geological

	Date	Days		Rate	S	ub-total
Louis Doyle Planning, managing & interpretation Room & board		1 1	\$ \$	600.00 150.00	\$ \$	600.00 150.00
<b>Rein Turna - Geologist</b> Report writing, maps & supervision Room & board		4 4	\$ \$	600.00 150.00	\$ \$	2,400.00 600.00
<b>Colleen Doyle</b> Report compilation and filing Room & board		1 1	\$ \$	400.00 150.00	\$ \$ <b>\$</b>	400.00 150.00 <b>4,300.00</b>
Doreen Property - Geochemical						,
Louis Doyle Soil sample collections	October 30, 2017	1	\$	600.00	\$	600.00
Soil sample collections Soil sample collections Room & board	October 31, 2017 November 1, 2017	1 1 3	\$ \$ \$	600.00 600.00 150.00	\$ \$ \$	600.00 600.00 450.00
Vehicle & gas		3	\$	150.00	\$	450.00
Brian Hall Soil sample collections Soil sample collections Soil sample collections Room & board	October 30, 2017 October 31, 2017 November 1, 2017	1 1 1 3	\$ \$ \$ \$	600.00 600.00 600.00 150.00	\$ \$ \$ \$	600.00 600.00 600.00 450.00
Louis Doyle Soil sample drying & XRF prep Soil sample drying & XRF prep Soil sample drying & XRF prep Room & board	December 2, 2017 December 3, 2017 December 4 , 2017	1 1 1 3	\$ \$ \$ \$	600.00 600.00 600.00 150.00	\$ \$ \$ \$	600.00 600.00 600.00 450.00
Brian Hall - XRF operator			•		•	
XRF analysis XRF analysis XRF analysis Room & board	December 2, 2017 December 3, 2017 December 4, 2017	1 1 1 3	\$ \$ \$	600.00 600.00 600.00 150.00	\$ \$ \$ \$	600.00 600.00 600.00 450.00
XRF rental		3	\$	200.00	\$ <b>\$</b>	600.00 <b>10,050.00</b>

# Barker Minerals Ltd.

# Work was completed between October 20, 2017 to December 13, 2017

# Work was done on claim # 1055620

### Event # 5677470

Doreen Property - Travel to and from						
Louis Doyle			•		•	
Travel to and from	November 2, 2017	1	\$	600.00	\$ ¢	600.00
Room & board Vehicle & gas		1 1	\$ \$	150.00 150.00	\$ \$	150.00 150.00
-			Ψ	100.00	Ψ	100.00
Brian Hall Travel to and from	November 2, 2017	1	\$	600.00	\$	600.00
Room & board		1	\$	150.00	\$	150.00
Vehicle & gas		1	\$	150.00	\$	150.00
-				Sub-total	\$	1,800.00
Doreen Property - Misc. expenditures						
Exploration supplies & equipment						
Safety equipment (MTC), exploration sup	nlies & equinment, communic	ation devic	201	& auad		
•••••••				a quuu	¢	125.00
Exploration supplies & equipment					\$	
MTC rental (vehicle & gas)		6	\$	150.00	\$	900.00
Quad rental		3	\$	150.00	\$	450.00
Communication devices						
Hand held radios, satelit phones & SPOT	locators	3	\$	24.00	\$	72.00
				Sub-total	\$	1,547.00
Doreen Property Expenditure Summar	у					
	G	eological		Sub-total	\$	4,300.00
		chemical		Sub-total		•
	Travel to	and from		Sub-total	\$	1,800.00
	Misc. expe	enditures		Sub-total	\$	1,547.00
		Ace Expe	ndi	ture Total	\$	17,697.00

#### Table No. 2 Doreen - Soil Sample Coordinates and Descriptions

XRF No. Fig. No. / Area Type X = Easting Y = Northing XRF Target and Description

#### Doreen Property

Doreen Pro	operty				
4886	Fig 5 / Area A	Soil >	K = 638805	Y = 5795912	B soil horizon
4887	Fig 5 / Area A	Soil >	K = 638827	Y = 5795919	B soil horizon
4888	Fig 5 / Area A	Soil >	K = 638850	Y = 5795922	B soil horizon
4889	Fig 5 / Area A	Soil >	K = 638873	Y = 5795924	B soil horizon
4890	Fig 5 / Area A	Soil >	K = 638897	Y = 5795925	B soil horizon
4891	Fig 5 / Area A	Soil >	K = 638920	Y = 5795927	B soil horizon
4892	Fig 5 / Area A	Soil >	K = 638943	Y = 5795930	B soil horizon
4893	Fig 5 / Area A	Soil >	K = 638966	Y = 5795935	B soil horizon
4894	Fig 5 / Area A	Soil >	K = 638988	Y = 5795941	B soil horizon
4895	Fig 5 / Area A	Soil >	K = 639010	Y = 5795948	B soil horizon
4896	Fig 5 / Area A	Soil >	K = 639032	Y = 5795957	B soil horizon
4897	Fig 5 / Area A	Soil >	K = 639053	Y = 5795966	B soil horizon
4898	Fig 5 / Area A	Soil >	K = 639074	Y = 5795977	B soil horizon
4899	Fig 5 / Area A	Soil >	K = 639095	Y = 5795984	B soil horizon
4900	Fig 5 / Area A	Soil >	K = 639117	Y = 5795977	B soil horizon
4901	Fig 5 / Area A	Soil >	K = 639139	Y = 5795970	B soil horizon
4902	Fig 5 / Area A	Soil >	K = 639162	Y = 5795970	B soil horizon
4903	Fig 5 / Area A	Soil >	K = 639186	Y = 5795970	B soil horizon
4904	Fig 5 / Area A	Soil >	K = 639209	Y = 5795973	B soil horizon
4905	Fig 5 / Area A	Soil >	K = 639232	Y = 5795976	B soil horizon
4906	Fig 5 / Area A	Soil >	K = 639255	Y = 5795981	B soil horizon
4907	Fig 5 / Area A	Soil >	K = 639277	Y = 5795985	B soil horizon
4908	Fig 5 / Area A	Soil >	K = 639300	Y = 5795992	B soil horizon
4909	Fig 5 / Area A	Soil >	K = 639322	Y = 5795999	B soil horizon
4910	Fig 5 / Area A	Soil >	K = 639343	Y = 5796009	B soil horizon
4911	Fig 5 / Area A	Soil >	K = 639364	Y = 5796019	B soil horizon
4912	Fig 5 / Area A	Soil >	K = 639385	Y = 5796029	B soil horizon
4913	Fig 5 / Area A	Soil >	K = 639406	Y = 5796038	B soil horizon
4914	Fig 5 / Area A	Soil >	K = 639428	Y = 5796046	B soil horizon
4915	Fig 5 / Area A	Soil >	K = 639448	Y = 5796058	B soil horizon
4916	Fig 5 / Area A	Soil >	K = 639467	Y = 5796071	B soil horizon
4917	Fig 5 / Area A	Soil >	K = 639486	Y = 5796085	B soil horizon
4918	Fig 5 / Area A	Soil >	K = 639486	Y = 579608	B soil horizon
4919	Fig 5 / Area A	Soil >	K = 639520	Y = 5796116	B soil horizon
4920	Fig 5 / Area A		K = 639531	Y = 5796135	B soil horizon
4921	Fig 5 / Area A		K = 639545	Y = 5796155	B soil horizon
4922	Fig 5 / Area A		K = 639554	Y = 5796176	B soil horizon
4923	Fig 5 / Area A		K = 639565	Y = 5796196	B soil horizon
4924	Fig 5 / Area A		K = 639584	Y = 5796210	B soil horizon
4925	Fig 5 / Area A		K = 639602	Y = 5796223	B soil horizon
4926	Fig 5 / Area A		K = 639624	Y = 5796242	B soil horizon
4927	Fig 5 / Area A		K = 639645	Y = 5796259	B soil horizon
4928	Fig 5 / Area A		K = 639680	Y = 5796302	B soil horizon
4929	Fig 5 / Area A		K = 639711	Y = 5796314	B soil horizon
4930	Fig 5 / Area A		<pre>&lt; = 639711</pre>		B soil horizon
4931	Fig 5 / Area A	Soil >	K = 639735	Y = 5796313	B soil horizon

Table No. 2Doreen - Soil Sample Coordinates and Descriptions

				-	VPF Terrest and Description
XRF No.	Fig. No. / Area		-	-	XRF Target and Description
4932	Fig 5 / Area A		X = 639758	Y = 5796312	B soil horizon
4933	Fig 5 / Area A		X = 639781		B soil horizon
4934	Fig 5 / Area A			Y = 5796310	B soil horizon
4935	Fig 5 / Area A		X = 639828	Y = 5796309	B soil horizon
4936	Fig 5 / Area A		X = 639851	Y = 5796308	B soil horizon
4937	Fig 5 / Area A	Soil	X = 639874	Y = 5796308	B soil horizon
4938	Fig 5 / Area A	Soil	X = 639898	Y = 5796307	B soil horizon
4939	Fig 5 / Area A	Soil	X = 639921	Y = 5796306	B soil horizon
4940	Fig 5 / Area A	Soil	X = 639944	Y = 5796311	B soil horizon
4941	Fig 5 / Area A	Soil	X = 639965	Y = 5796321	B soil horizon
4942	Fig 5 / Area A	Soil	X = 639984	Y = 5796335	B soil horizon
4943	Fig 5 / Area A	Soil	X = 640001	Y = 5796350	B soil horizon
4944	Fig 5 / Area A	Soil	X = 640022	Y = 5796361	B soil horizon
4945	Fig 6 / Area B	Soil	X = 640043	Y = 5796371	B soil horizon
4946	Fig 6 / Area B	Soil	X = 640064	Y = 5796381	B soil horizon
4947	Fig 6 / Area B	Soil	X = 640085	Y = 5796395	B soil horizon
4948	Fig 6 / Area B	Soil	X = 640107	Y = 5796396	B soil horizon
4949	Fig 6 / Area B	Soil	X = 640130	Y = 5796395	B soil horizon
4950	Fig 6 / Area B	Soil	X = 640153	Y = 5796394	B soil horizon
4951	Fig 6 / Area B	Soil	X = 640176	Y = 5796394	B soil horizon
4952	Fig 6 / Area B	Soil	X = 640200	Y = 5796396	B soil horizon
4953	Fig 6 / Area B	Soil	X = 640223	Y = 5796398	B soil horizon
4954	Fig 6 / Area B	Soil	X = 640246	Y = 5796398	B soil horizon
4955	Fig 6 / Area B	Soil	X = 640269	Y = 5796399	B soil horizon
4956	Fig 6 / Area B	Soil	X = 640293	Y = 5796399	B soil horizon
4957	Fig 6 / Area B	Soil	X = 640316	Y = 5796400	B soil horizon
4958	Fig 6 / Area B	Soil	X = 640338	Y = 5796405	B soil horizon
4959	Fig 6 / Area B	Soil	X = 640360	Y = 5796414	B soil horizon
4960	Fig 6 / Area B	Soil	X = 640360	Y = 5796414	B soil horizon
4961	Fig 6 / Area B		X = 640404	Y = 5796424	B soil horizon
4962	Fig 6 / Area B		X = 640427	Y = 5796424	B soil horizon
4963	Fig 6 / Area B		X = 640450	Y = 5796424	B soil horizon
4964	Fig 6 / Area B		X = 640471	Y = 5796412	B soil horizon
4965	Fig 6 / Area B		X = 640491	Y = 5796401	B soil horizon
4966	Fig 6 / Area B		X = 640512	Y = 5796390	B soil horizon
4967	Fig 6 / Area B		X = 640533	Y = 5796381	B soil horizon
4968	Fig 6 / Area B		X = 640555	Y = 5796374	B soil horizon
4969	Fig 6 / Area B		X = 640577	Y = 5796367	B soil horizon
4970	Fig 6 / Area B		X = 640600	Y = 5796360	B soil horizon
4971	Fig 6 / Area B		X = 640622	Y = 5796353	B soil horizon
4972	Fig 6 / Area B		X = 640644	Y = 5796346	B soil horizon
4973	Fig 6 / Area B		X = 640666	Y = 5796338	B soil horizon
4974	Fig 6 / Area B		X = 640688	Y = 5796331	B soil horizon
4975	Fig 6 / Area B		X = 640710	Y = 5796324	B soil horizon
4976	Fig 6 / Area B		X = 640733	Y = 5796319	B soil horizon
4977	Fig 6 / Area B		X = 640755	Y = 5796315	B soil horizon
4978	Fig 6 / Area B		X = 640776	Y = 5796319	B soil horizon
		001	<u>, - 070770</u>	1 - 57 50513	b son nonzon