## ASSESSMENT REPORT TITLE PAGE AND SUMMARY

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MINING DIVISION: Cariboo
BCGS: 93A/12
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LONGITUDE - $\mathbf{1 2 1 . 6 5}{ }^{\circ} \mathbf{W}$
UTM Zone NAD 83 EASTING 591250 NORTHING 5839100
OWNER(S): Barker Minerals Ltd.
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Upper Triassic, Lower Jurrassic, Andesitic Volcanics, Gold, Silver \& Copper

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS


## GEOCHEMICAL

## ASSESSMENT REPORT

on the

# KANGAROO \& FRANK CREEK PROPERTIES 

Cariboo Mining Division, British Columbia

The geographic coordinates of the Kangaroo Property are:
$52.69^{\circ}$ North Latitude and $-121.65^{\circ}$ West Longitude or
591250 E and 5839100 N UTM coordinates (NAD 83).
The relevant map is: N.T.S. Map No. 93A/12.
Work was concentrated in the area of tenure nos. 1038868 and 1038885.


Prepared by:
Rein Turna

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### 1.0 INTRODUCTION

The Kangaroo and Frank Creek Projects are located on a group of contiguous mineral claims that may be called the Main Property. The Main Property is $15,384.75$ ha in size. The Kangaroo and Frank Creek Projects are approximately 10 km northwest and northeast, respectively, from the community on Likely and 80 km northeast of the City of Williams Lake.

The major portion of this report is related to work done on the Kangaroo Project. The Frank Creek portion of this report is relatively minor due to the lesser amount of sampling done there in 2016. The mineral prospects on the Kangaroo Project are for Au skarn, intrusionrelated Au pyrrhotite veins, and porphyry $\mathrm{Cu} \pm \mathrm{Mo} \pm A u$. Cross Lake Minerals Ltd.' QR gold mine, an Au skarn deposit, located 8.0 km wsw of the Barker Minerals' Kangaroo Project, is considered the possible model for mineralization explored for on Kangaroo.

The geology of the Kangaroo Project consists of sedimentary and volcanic rocks of the Upper Triassic to Lower Jurassic Nicola Group and associated intrusions, similar to lithologies at the QR mine. The intrusive stock at Kangaroo as mapped is at least approximately $1 \mathrm{~km} \times 1.8 \mathrm{~km}$ on the ground surface, similar in size to the QR stock. More detailed mapping may revise the Kangaroo stock's area upward.

The purpose of this report is to summarize the geologic setting and economic target at Kangaroo and to describe and interpret the rock sampling results from the 2016 geochemical surveys at Kangaroo and Frank Creek. Altogether 277 geochemical analyses were made of the rock samples.

### 2.0 PROPERTY DESCRIPTION and LOCATION

The Kangaroo Project consists of contiguous claims listed in Table No. 1 - Barker Minerals Ltd. Main Property Mineral Claim Details. The Main Property's location in British Columbia is indicated in Figure No. 1 - Barker Minerals Ltd. Main Property Location in British Columbia, and the mineral claims are outlined in Figure No. 2 - Barker Minerals Ltd. Mineral Claims.

The Main Property is located in the Cariboo Mining Division in British Columbia and is 100\% owned by Barker Minerals Ltd. of Prince George, B.C. The Property is approximately 10 km northwest and northeast of the community of Likely and 80 km northeast the City of Williams Lake. The City of Prince George is 155 km to the north.

The geographic coordinates of the Kangaroo Project are:
$52.69^{\circ}$ North Latitude and $-121.65^{\circ}$ West Longitude or
591250 E and 5839100 N UTM coordinates (NAD 83).
The relevant map is: N.T.S. Map No. 93A/12.

| Tenure <br> Number | Owner No. | Owner |  | $\frac{\text { Good To }}{\text { Date }}$ | Status | $\frac{\text { Area }}{\text { (ha) }}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 504428 | 140410 | Barker Minerals Ltd. | 100\% | 2017/FEB/05 | Good | 215.31 |
| 1038860 | 140410 | Barker Minerals Ltd. | 100\% | 2017/FEB/05 | Good | 58.73 |
| 1038862 | 140410 | Barker Minerals Ltd. | 100\% | 2017/FEB/05 | Good | 58.74 |
| 1038868 | 140410 | Barker Minerals Ltd. | 100\% | 2017/FEB/05 | Good | 2547.09 |
| 1038883 | 140410 | Barker Minerals Ltd. | 100\% | 2017/FEB/05 | Good | 2561.09 |
| 1038884 | 140410 | Barker Minerals Ltd. | 100\% | 2017/FEB/05 | Good | 2132.57 |
| 1038885 | 140410 | Barker Minerals Ltd. | 100\% | 2017/FEB/05 | Good | 1311.38 |
| 1038886 | 140410 | Barker Minerals Ltd. | 100\% | 2017/FEB/05 | Good | 2780.96 |
| 1038887 | 140410 | Barker Minerals Ltd. | 100\% | 2017/FEB/05 | Good | 1213.73 |
| 1038888 | 140410 | Barker Minerals Ltd. | 100\% | 2017/FEB/05 | Good | 2505.15 |

Total area: 15,384.75 ha
Table No. 1 - Barker Minerals Ltd. Main Property, comprising Kangaroo and Frank Creek, Mineral Claim Details.


Figure No. 1 Barker Minerals Ltd. Main Property location in British Columbia includes the Kangaroo and Frank Creek Projects.


### 3.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE and PHYSIOGRAPHY

The closest large centre to the Barker Minerals project areas is Williams Lake located approximately 80 km to the southwest. Williams Lake is an intermediate-sized city and served by Highway 97, the B.C. Railway, a major hydroelectric power grid and a modern airport. By road, Likely is 65 km northeast of 150 Mile House on Highway 97. Access to Barker Minerals exploration areas, including the Kangaroo and Frank Creek Projects, is via gravel logging roads bearing northeast from Likely. The distance from Likely to Kangaroo is approximately 40 km by road.

The Kangaroo Project is situated in the central part of the Quesnel Highland between the eastern edge of the Interior Plateau and the western foothills of the Columbia Mountains. This area contains rounded mountains that are transitional between the rolling plateaus to the west and the rugged Cariboo Mountains to the east. Pleistocene and Recent ice sheets flowed away from the high mountains to the east over these plateau carving U-shaped valleys. The elevation ranges from $750-$ 1150 m .

Precipitation in the region is heavy, as rain in the summer and snow in the winter. Drainage is to the west via the Cariboo, Little and Quesnel Rivers to the Fraser River. Quesnel Lake, the main scenic and topographic feature in the region, is a deep, long, forked, glacier-carved lake with an outlet at 725 m elevation. Vegetation is old-growth spruce, fir, pine, hemlock and cedar forest in all but the alpine regions of the higher mountains. Logging of fir, spruce and pine in the area occurs principally during winters. Snow can limit the work season to approximately May to November, but drilling can be conducted any time during the year if the access road is plowed clear.

### 4.0 HISTORY

The Frank Creek Project has historically had extensive work on it, including drilling, trenching, soil sampling and geophysical and geological mapping surveys; it would be appropriate to consult the References for an adequate description. Historical work programs done on the Kangaroo Project area between, 1984 and 2007, are briefly described below.

### 4.1 Work Done in 1984.

The relevant report is Assessment Report 13160 by R.G. Simpson.
Work was done in 1984 for NCN Exploration and Development Corp. on the Tag, Tango and Cave claim groups consisting 95 claim units located between Kangaroo Mountain and Kangaroo Creek, approximately 4.5 km to the east. The economic target was for a bulk disseminated gold deposit.

Geological mapping was done and 303 soil samples were collected over 30.3 line km over a grid approximately $4 \mathrm{~km} \times 5 \mathrm{~km}$ in area. This work was done in follow up to a regional airborne magnetic and VLF-EM geophysical survey done apparently over only the eastern part of the claim groups.

Lithologies consisted of various tuffs and breccia; laminated tuffs and argillite contained disseminated pyrrhotite and pyrite. Less common were massive basaltic flows. The airborne survey detected no significant anomalous magnetism and only 4 minor VLF-EM anomalies. Four of the soils were weakly anomalous in $\mathrm{Au}(40 \mathrm{ppb}$ maximum value) and 9 soils were weakly anomalous in Ag ( 3.3 ppm maximum value). The results obtained were not considered worthy of further follow up.

### 4.2 Work Done in 1985.

The relevant report is Assessment Report 13865 by R.M. Durfeld.

Work was done in 1985 for Mt. Calvery Resources Ltd. on the Kangaroo claim group consisting 94 claim units named Jun and Rose. These claims were located on the east and west sides of the lower part of Kangaroo Creek and were the north portion of their large Cariboo-Likely Project.

20 stream silts, 103 soils and 8 rock samples were collected. This work was done in follow up of a regional stream soil sampling program of the previous year. The soils were collected over 6 widely scattered small grids at locations of soil anomalies (Anomalies $1-6$ ) from their 1984 regional program.

Anomaly 1 was a 1984 soil sample with 450 ppb Au. 39 soils collected here in the 1985 follow up had anomalous Cu , up to 259 ppm , and weakly anomalous Au , up to 40 ppb . This anomalous location was where Barker Minerals would in 2007 map the north boundary of a diorite intrusive (the Kangaroo stock) characterized by an approximately 1,000 m wide zone of low resistivity and high chargeability (Turna and Doyle, 2008). Mapping in 1985 here determined this Anomaly to be underlain by rhyolite and andesite intruded by mafic intrusive rocks.

Anomaly 2 (210 ppb Au in 1984) had only 5 soils collected over it in 1985 of which, the highest Au value was 35 ppb .

Follow up of Anomalies 3 to 6 returned sporadic, isolated, weakly anomalous $\mathrm{Au}, \mathrm{Cu}, \mathrm{Ag}$ or As. Anomaly 3 was explained as a placer concentration. The Au anomalies of the previous year at Anomalies 2,3 and 6 were not reproduced in 1985. Additional sampling was recommended at Anomalies 1, 4 and 5 to better define the anomalous trends of precious and pathfinder elements there.

Westenhiser Creek, flowing into Cariboo River approximately 1.5 km east of Kangaroo Creek, had 400 ppb Au in a stream silt. A narrow discontinuous quartz-sulphide vein sampled (Sample 26035) just upstream of this silt had $6,000 \mathrm{ppb} \mathrm{Au}, 13.5 \mathrm{ppm} \mathrm{Ag}, 18,951$ ppm As, $2,044 \mathrm{ppm} \mathrm{Cu}$. The upper part of this creek (called '69 Creek' in Turna and Doyle, 2008) was sampled at 4 locations by Barker Minerals in 2007. None of these silts were anomalous in Au. Thus it would appear that the location of Sample 26035 in the lower part of the creek is the source of the stream anomaly below. A soil sample collected in 2007 by Barker Minerals, approximately 1.3 km ESE of Sample 26035 was weakly anomalous in gold ( 35 ppb Au ) and strongly anomalous in zinc ( $1,950 \mathrm{ppm} \mathrm{Zn}$ ). Rocks here were very rusty siltstone adjacent to diorite; a rock sample here had 16 ppb Au and 274 ppm Zn . (Turna and Doyle, 2008, Fig. No. 46).

Additional prospecting was recommended in 1985 to expand the potential of this mineralized structure.

### 4.3 Work Done in 1986.

The relevant report is Assessment Report 15716 by A.J. Schmidt.

Work was done in 1986 for Mt. Calvery Resources Ltd. on the Rose, Spanish and Jun claim groups of their Cariboo-Likely Project consisting of 520 claim units.

Follow up work was done on Westenhiser Creek where in the previous year, rock Sample 26035 had gold ( $6,000 \mathrm{ppb} \mathrm{Au}$ ). 104 soil samples were collected. Of these, 10 soils had 30 ppb Au or higher; 3 soils had Au values above 100 ppb, up to 180 ppb. Several anomalous soils were clustered on the eastern slope of the creek 150 m from the gold-bearing vein. The quartz-pyrite vein system was chip sampled; the best result was $1,140 \mathrm{ppb}$ Au over 1.0 m . The occurrence was described as a mineralized shear zone, about 10 m wide, striking $100^{\circ}$ and dipping vertically. Within the shear 3 quartz-pyrite veins, between 40 and 80 cm in width occurred with several $5-10 \mathrm{~cm}$ wide veins. The enclosing rocks were silicified argillites/siltstones. The gold values here were not considered significant and further follow up was not recommended. (Schmidt, 1986, pp 6,7).

### 4.4 Work Done in 2003

McKinley (2004) reports that:
[Barker Minerals] initiated a small reconnaissance exploration program on their Kangaroo Creek Project in November 2003. The goals of this work were to confirm the geological setting of the area and compare this with observations of previous workers and to assess if the geophysical anomalies identified on the Cross Lake [Cariboo] claims to the west trend onto the Barker Minerals claims.

A small IP and magnetic geophysical survey was conducted in November 2003 on the westernmost portion of Barker claim PG 9 by Peter E. Walcott \& Associates of Vancouver,
B.C. Three parallel lines spaced 100 metres apart and totalling about 5500 metres in length were surveyed ...Two main IP chargeability anomalies were identified, both of which appear to increase in intensity to the east. The larger northernmost anomaly corresponds to a resistivity low and is along strike from the large Cu-Mo-Au soil geochemical anomaly identified by Cross Lake. The southern anomaly appears to be along strike of Cross Lake's anomalous Au-Cu-As-Sb geochemical trend as well as the ground that hosts the historical gold-mineralized interval [5.26 g/t Au over 8.5 m ] intersected by Corona in 1989 in drill hole C89-6. The zones having high resistivity with coincidental magnetic highs likely represent the intrusive rocks identified in outcrop nearby.

### 4.5 Work Done in 2005

Barker Minerals did reconnaissance soil sampling and magnetometer surveys adjacent to an intrusive body, later the area of the 2007 work program. 473 soil samples were collected on 6 lines at various orientations labelled KTL1 to KTL6 and on the 3 lines labelled KL0, KL1 and KL2 on which the 2003 IP survey was done. This work was not included in the Assessment of Barkers Minerals' group of claims, however results from the 2005 soil sampling are discussed with the 2007 sampling in this report (see also Sections 8.6 and 12.2).

The southern portions of Lines labelled KL0, KL1 and KL2 were strongly anomalous in Au, As and multi-element pathfinders. Drill hole K07-5 tested this area in 2007. Scattered anomalous Au (up to $3,320 \mathrm{ppb}$ over 1.50 m ) and chalcopyrite mineralization occurred over almost the entire hole ( 261 m ). Multi-element anomalies, including Au, also occurred on reconnaissance lines farther east, on the south side of the intrusive body. Drill holes K07-6 and 7 targeted this area in 2007. The magnetometer survey was done along approximately 2.0 km on the main road crossing the area. The middle third of the road traverse was determined to be anomalously magnetic. In 2007 this zone was targeted by drill holes K078 and 9.

### 4.6 Work Done in 2007

Drilling and geophysical work are described in Assessment Report 29740 byTurna and Doyle, (2008). A soil survey was done after the assessment period and results were not included in the assessment report. These soil survey results are provided in this report (Section 12.2).

The diamond drilling program was done on the Kangaroo property to follow up high chargeability and low resistivity anomalies from the IP survey done in 2003, and anomalous soils collected in 2005. Nine holes 2,008 (metres) were drilled. 915 core samples were collected, 57 rock samples, 46 soils and 21 stream sediment samples were collected. Geological mapping was done over approximately 2.5 square kilometres in the general area of the drilling. 40 km (nominal length) of grid lines were established on the property. Stations were placed every 25 metres on the grid lines. Quantec Geoscience Inc. did a
pole-dipole induced polarization (IP) survey over 32.0 km on this grid and a Titan-24 IP survey over 8.0 km . Approximately 605 soil sample were collected over the western half (Lines KL0 to KL11) of this grid during the winter before being suspended due to weather.

Soils over the Kangaroo stock and the adjacent alteration aureole in sedimentary rocks are anomalous in $\mathrm{Au}, \mathrm{Cu}, \mathrm{Mo}$ and other elements. The area of the Au soil anomaly over the soil survey is approximately $1 \mathrm{~km} \times 2 \mathrm{~km}$ and remains open to the east and south. The eastern portion of the soil survey should be completed before a comprehensive interpretation is made.

The IP survey determined a low resistivity anomaly extends approximately $1,000 \mathrm{~m}$ from the north side of the stock, and a high chargeability zone associated with the intrusive extends for approximately 500 m north from the intrusive. Zones of high chargeability and low resistivity occur on the north and south sides of the intrusive. Generally the north side anomalies are the more intense and extensive.

In the drilling program, spotty high Au values (up to $15,700 \mathrm{ppb}$ Au over 1.51 m in hole K07-1) occurred in several holes.

### 5.0 GEOLOGICAL SETTING

### 5.1 Regional Geology

The geological descriptions in this Section derive mainly from Struik (1988), Panteleyev et al. (1996) and Payne and Perry ( 2001); these authors are quoted extensively.

The western Canadian Cordillera is made up of a number of terranes representing crustal blocks of fundamentally contrasting histories. The terranes are commonly bounded by faults and trench complexes or collisional suture zones.

The fundamental geologic components that make up the terranes are referred to as 'tectonic assemblages'. The assemblages represent rocks deposited in specific tectonic settings during certain periods of time and, therefore, are commonly bounded by unconformities or faults. They represent distinctive successions of stratified rocks and other characteristic lithologies, mainly coeval metamorphic, plutonic and ultramafic rocks. The assemblages are categorized in terms of their predominant depositional setting or position relative to the orogen, for example, island arc, back arc, ocean basin or continent-margin foredeep clastic wedge or passive-margin sediment, and so forth. Tectonic assemblages are commonly named after their principal constituent formation, group or region in which the assemblage is best described. During the mid-Jurassic the North American continental plate collided with a group of island arcs to the west.


Figure No. 3 Terrane Map of Southern British Columbia. Barker Minerals' properties are indicated by the red star over the Barkerville subterrane. The brown star to the SE is the Barkerville Gold Mine Ltd.' Goldstream volcanogenic massive sulphide deposit. Map is from Ferri, F. \& Schiarizza, P., 2006.


Figure No. 4 Terrane Map of Cariboo Lake - Wells Area. Several Barker Minerals' properties are indicated by red stars. Map is from Ferri, F. \& Schiarizza, P., 2006.


Figure No. 5 Geology of Wells-Cariboo Lake Area. Highlighted on the BCGS map are Barker Minerals' Frank Creek and Unlikely massive sulphide prospects and the Kangaroo Project. The Harveys Ridge succession consists of siltstone, quartzite and the Frank Creek volcanics. Map is from Ferri, F. \& Schiarizza, P., 2006

The geological descriptions below derive mainly from Struik (1988), Panteleyev et al. (1996) and Payne and Perry (2001).

During the mid-Jurassic the North American continental plate collided with a group of island arcs to the west. Regional deformation and metamorphism are related to these events.


Figure No. 6 Schematic regional structural section from southwest to northeast across the four Terranes in Barker Minerals' claims area, showing the relative structural position of the Terranes. The Terrane symbols are BV-Barkerville, C-Cariboo, Sma-Slide Mountain (Antler Formation), SMc-Slide Mountain (Crooked amphibolite), QN-Quesnel and NA-North American. (after Struik, 1988).

## Quesnel Terrane

The Late Triassic to Early Jurassic Quesnel Terrane...was accreted to the North American continent, in part by subduction and in part by obduction. The Eureka Thrust fault marks the boundary between the Quesnel and Barkerville terranes. The terrane is partly submarine and partly subaerial, consisting of volcanic and volcaniclastic rocks and co-magmatic intrusions, with minor carbonate lenses and related sedimentary rocks.

The principal assemblage in the Quesnel Terrane is the Triassic-Jurassic Nicola Group island arc - marginal basin sequence. The underlying rocks are the Crooked Amphibolite, part of the Slide Mountain assemblage, a mylonitized mafic and ultramafic unit of oceanic marginal basin volcanic and sedimentary rocks. Rocks of Quesnel Terrane and Crooked Amphibolite are structurally coupled and tectonically emplaced by the Eureka Thrust onto the Barkerville Terrane, to the east.

Two lithostratigraphic subdivisions of the Quesnel Terrane consists of: a basal Middle to Late Triassic metasedimentary unit of dominantly black phyllitic rocks, approximately 7 km
thick, and an overlying Late Triassic to Early Jurassic volcanic arc assemblage, approximately 9 km thick. The overlying volcanic rocks outline a northwesterly trending belt of subaqueous and subaerial volcanic rocks, deposited along a series of volcanic-intrusive centres that define the Quesnel island arc of predominantly alkalic basalts.

Within...the northern extension of the Quesnel Trough, the term...Takla Group has been applied to rocks identical to the Quesnel belt rocks...Equivalent rocks to the south...are generally referred to as Nicola Group...Baily (1978) pointed out the similarity of the Quesnel volcanic units with both the Nicola Group rocks to the south and the Takla Group rocks to the north...The term Takla leads to ambiguity because in northern British Columbia it has been used for rocks in both Quesnel and Stikine terranes...The usage for the TriassicJurassic volcanic arc and related rocks in Quesnellia currently preferred is Nicola Group. The term Takla Group possibly should be discarded... (Panteleyev et al., (1996).

The Quesnel Trough is a well-mineralized region typical of other Late Triassic to Early Jurassic volcano-plutonic island arcs in the Cordillera. It hosts a wide variety of mineral deposits. The principal recent exploration and economic development targets in the central Quesnel belt are alkalic intrusion-related porphyry copper-gold deposits and gold-bearing propylitic alteration zones formed in volcanic rocks peripheral to some of the intrusions. Other important targets are auriferous quartz veins in the black phyllite metasedimentary succession. The veins in some black phyllite members have potential to be mined as large tonnage, low-grade deposits. Tertiary rocks are mineralized with copper and gold. Antimony-arsenic and mercury mineralization in some apparently low temperature quartzcalcite veins indicated the potential for epithermal deposits. Placer mining for gold, said to occur together with platinum, has been of major historical and economic importance.

## Slide Mountain Terrane

Rocks of the Devonian to Late Triassic Slide Mountain Terrane were partly obducted, partly subducted during collision of an oceanic plate with the continent. Small slices of mainly mafic volcanic rocks and ultramafic rocks of the Slide Mountain Terrane occur in and parallel to the Eureka thrust. Minor lithologies include chert, meta-siltstone and argillite.

The Crooked Amphibolite, considered to likely be a part of the Slide Mountain Terrane, includes three major constituent rock types: greenstone, metagabbro and meta-ultramafite. North of Quesnel Lake, the map units consist of mafic metavolcanics, amphibolite, chlorite schist, serpentinite, ultramafic rocks and pillow lavas. Chemical analyses indicate subalkaline tholeiitic compositions of basalts formed on the ocean floor. If the Crooked Amphibolite is a sheared and metamorphosed equivalent of the Antler Formation and is part of the Slide Mountain Terrane, it is separated from the underlying Barkerville Terrane by the Eureka Thrust, a wide zone of mylonitization. The Crooked amphibolite and the overlying rocks of Quesnel Terrane are structurally coupled and emplaced tectonically onto Barkerville Terrane.

## Barkerville Terrane

The Barkerville Terrane is made up of the Snowshoe Group and Quesnel Lake gneiss. The Snowshoe Group rocks are Upper Proterozoic to Upper Devonian metasediments, considered correlative in age with the Eagle Bay Formation in the Kootenay Terrane to the south. The Snowshoe Group rocks are dominated by varieties of grit, quartzite, pelite, limestone and volcaniclastic rocks. The stratigraphic sequence is not well understood. The region was deformed by intense, complex, in part isoclinal folding and overturning. Locally, strong shear deformation produced mylonitic textures. The Quesnel Lake Gneiss is a Devonian to Mississippian intrusive unit varying in composition from diorite to granite to syenite. It is generally coarse grained, leucocratic, often with megacrysts of potassium feldspar. The main body of gneiss is 30 km long by 3 km wide and is elongated parallel to the eastern border of the Intermontane belt. Its contacts are in part concordant with, and in part perpendicular to, metamorphic layering.

The contact between the Barkerville Terrane and Cariboo Terrane to the east is the Pleasant Valley Thrust. The Barkerville and Cariboo Terranes were juxtaposed prior to emplacement of the Slide Mountain Terrane which was thrust over both of them. The northeastern third of the Barkerville Terrane is the main zone of economic interest in the Cariboo district. Struik described it as "gold-enriched", because it contains the historic Wells and Barkerville gold mines and the Cariboo Hudson deposit, approximately 40 km and 20 km northwest of the project area, respectively.

## Cariboo Terrane

The northeastern part of Barker Minerals' 'Peripheral' claim group is underlain by Precambrian to Permo-Triassic marine peri-cratonic sedimentary strata of the Cariboo terrane. The Cariboo Terrane consists mainly of limestone and dolomite with lesser siliceous, clastic, sedimentary rocks and argillite. Some geologists believe that the Cariboo Terrane is a shallow, near-shore facies and the Barkerville is a deeper, offshore facies of the same erosion-deposition system. No rifting is suspected between the Cariboo Terrane and the North American continent, in contrast to that between the Barkerville Terrane and the North American continent. Lithologies within the Cariboo Terrane correlate well with parts of the Classier Platform and Selwyn Basin of Yukon and northern British Columbia.

The Cariboo and Barkerville Terranes are separated by the regional Pleasant Valley Thrust fault, which dips moderately to steeply northeast. Struik (1988) states the Cariboo block was thrust from the east over the Barkerville block along a strike length of over 100 km . The Cariboo Terrane was cut by the Jurassic-Cretaceous Little River stock, a medium-grained granodiorite grading to quartz monzonite. Some of the carbonate layers in the lowest part of the Cariboo terrane (or upper part of the Barkerville Terrane) are enriched in zinc and lead. Since the 1970's, preliminary exploration on stratiform $\mathrm{Zn}-\mathrm{Pb}$ targets has been conducted in this area.

## Glaciation and glacial deposits

The last glacial stage that affected the Quesnel Highland, the Fraser glaciation, began 30,000 years ago. Much of this ice had melted by 10,000 years ago, but small remnants are preserved high in the alpine areas of the Cariboo Mountains. At lower elevations, glaciers of this age scoured the debris left by preceding ice advances, almost completely destroying them, leaving a chaotic assemblage of unsorted till, moraine and drift, with lenses of gravel and sand that had been roughly sorted by melt water and rivers, leaving behind beds of silt and clay that were stratified by settlement in ice-dammed lakes. In the Cariboo area, the debris covers bedrock in valleys below $1,700 \mathrm{~m}$, leaving typical glacial features such as Ushaped valleys, ice-sculpted drumlins, moraine terraces and glacier and river benches. On the Barker Minerals properties, glacial deposits range from one to a few tens of metres thick. Some glacial till deposits are overlain by well-bedded glaciolacustrine clay and silt deposits up to a few tens of metres thick.

In much of the Cariboo district, a layer of distinctive, hard, compact, semi-rigid blue clay sits either on or slightly above bedrock and acts as "false" bedrock. It was formed from glacial drift left behind by the last ice advance prior to the Fraser glaciation and was compacted by the weight of the Fraser stage ice. In the placer-gold areas of the Cariboo, large amounts of gold were recovered from gravel resting on this clay. In places the clay layer was penetrated by the placer miners to reach richer "pay streaks" on true bedrock below.

### 5.2 Local Geology

The geology on the Kangaroo Property consists of basalt and siltstones intruded by a multimodal intrusive stock, consisting of gabbro, diorite and monzodiorite, lithologies similar to that at the QR gold mine, 8.0 km WSW of the Kangaroo Property. The stock at Kangaroo $(1.0 \mathrm{~km} \times 1.8 \mathrm{~km}$ ) is similar in size to the QR stock ( $1.0 \mathrm{~km} \times 1.5 \mathrm{~km}$ ) at the QR mine; both stocks' long dimension is in the E-W direction.

The diorite intrusive at Kangaroo has an elongate shape whose northern boundary grid coordinates occur at approximately 1400 N . The southern boundary grid coordinates varies between approximately 600 N and 1300 N as the intrusive appears to thin toward the NE.

## Lithologies

The most common rock type encountered in the drill holes was fine grained siltstone and andesite. Colour varies from light to dark grey, relatively rare graphitic versions are blackish. Fine bedding occurs commonly, with relatively uncommon fine sandstone interbeds. The siltstones are locally intensely fractured, weakly welded back together with chlorite. No significant graded bedding was observed. Andesitic volcaniclastics are often interbedded with the siltstones. These are mainly distinguished by a coarser texture and a somewhat lighter and greenish grey colour due to higher chlorite content.

The basalts are locally brecciated and sometimes amygdaloidal and are considered to be lavas or otherwise extrusives. Some of the basalts are difficult to characterize, some may be dikes and fine grained chilled intrusive rock.

The intrusive body consists mainly of diorite or porphyritic gabbro. These are medium to fairly coarse grained in the case of the porphyritic rocks. Colour varies from light to dark grey, some of the coarser gabbro are rather leucocratic or light coloured. The larger phenocrysts are augite, sometimes up to approximately 10 mm . Monzodiorite contained pink coloured monzonite xenoliths.

## Structure

Siltstones adjacent to the intrusive stock have bedding that strike NW, N and NE and steep dips eastward or westward. These attitudes suggest the presence of a syncline who's NWSE to N-S axis occurs in the vicinity of east end of the intrusive.

The manner in which the diorite and gabbro occur suggests these may be, in part, sills.

### 6.0 DEPOSIT TYPE

Frank Creek is a volcanogenic massive sulphide prospect. The Kangaroo Project is related to intrusion-related gold. Skarn and vein-type chalcopyrite and Au mineralization at Kangaroo occur preferentially in calcareous basalts but also in calcareous and silicified siltstones and in veinlets in the dioritic porphyry. Anomalous Au , with $\mathrm{Cu}, \mathrm{Mo}$ and As , in soils sampled in 2007 occur over the intrusive body and a certain distance into the intruded siltstones and basalts. Possible Au deposit forms at Kangaroo can be proximal, intermediate and distal to the mineralizing intrusion similar to that shown in Figure No. 6 below.


Figure No. 7 Generalized Zoning Model for Au-Enriched Porphyry Cu Systems. (modified from Sinclair (2004) after Jones, (1992)).

The QR gold mine, 8.0 km WSW of the Kangaroo Property, is considered by the BCGS as a type example of an Au skarn (BCGS deposit type K04). At the QR mine Au mineralization occurs mainly stratabound in basalt adjacent to overlying sediments and near the alteration front a certain distance from a diorite intrusive. The QR example is considered to be the most likely model for Kangaroo. Intrusion-related Au pyrrhotite veins, (BCGS deposit type 102), is also in consideration at Kangaroo due to the very common occurrence of pyrrhotite, disseminated and veined in most rock types, and massive in hornfelsic skarn. The occurrence of anomalous Au in veinlets in the intrusive and in soils over it, and anomalous Cu and Mo in soils over and adjacent to the intrusive suggest the possibility of a porphyry $\mathrm{Cu} \pm \mathrm{Mo} \pm \mathrm{Au}$ (BCGS deposit type LO4) related model. The British Columbia Geological Survey deposit types under consideration at Kangaroo are discussed in detail in Appendix A - B.C. Geological Survey Deposit Types.

A 'propylite model' was proposed by Panteleyev et al (1996, pg 80-83) in their discussion of the QR deposit. They considered the unusual aspects of the style of mineralization in the propylite model sets it apart from other gold skarns and deserve to be identified as a deposit type that is distinct from the gold skarn model. Their description of the Propylite Model had the QR Deposit specifically in mind; it is quoted in italics below.

## The Propylite Model

Rock Types: Epidote and pyrite-rich auriferous propylitic alteration (epidote-chlorite-tremolite-calcite and rare garnet), with minor other sulphide minerals, occurs as lithologically controlled, conformable replacement zones within a thermal aureole adjacent to an intrusive body. Host rocks are hornfels and epidote-rich propylite derived from mafic volcanics, commonly with alkalic (shoshonitic) compositions, mafic tuffs and volcanic sandstones and calcareous mudstone. Intrusions are generally small, zoned stocks with diorite to syenite compositions. Their age is similar to, or slightly younger than, their host rock alkalic volcanics. Feldspathic hornblende porphyry dikes and sills are common. The stocks exhibit little alteration but have a weakly developed porphyry copper-style mineralization. Related dikes and sills in the mineralized zones external to the stock may be more extensively hydrothermally altered than the main intrusion.

Mineralization and Alteration: Propylitic zones with auriferous pyrite occur within the propylitic alteration aureole. The better grades are generally at the outer periphery of the propylitic alteration zone, commonly at lithologic unit or bedding contacts. Tabular, conformable mantos may form in permeable beds and units, commonly along the contact between hornfels or other less permeable rocks and the propylitic fragmental volcanic rocks. Faults or other, older structural features may be mineralized and form ore zones that are transgressive to strata.

Pervasive propylitic alteration of the matrix and clast rims of fragmental volcanic rocks is characterized by disseminated grains or intergrowths of epidote with chlorite, calcite, tremolite, quartz, albitic plagioclase, clinozoisite and rare andradite garnet. Calcite is abundant peripheral to the propylitic alteration zone and in the mudstone beds. Fracture controlled quartz-sericite-pyrite zones may occur in subordinate amounts.

Granular pyrite-epidote-calcite aggregates replace the matrix of the volcaniclastic rocks and clast rims. Locally pods and lenses contain up to $80 \%$ pyrite and other rare sulphide grains. Pyrite also occurs as fracture coatings, seams and veinlets with calcite and epidote. It is the predominant sulphide mineral; the ore mineral is gold. Subordinate minerals are chalcopyrite, pyrrhotite, sphalerite and marcasite with minor galena, and arsenopyrite. Magnetite may be present as a constituent in some sulphide-rich bands. Gangue minerals in addition to the abundant epidote, chlorite and calcite are tremolite, quartz, clinozoisite and rare andradite garnet. Permeability in the volcaniclastic rock is a fundamental ore control; secondary controls are tectonic breccias, faults and fracture zones that provide additional fluid flow paths. Chemically reactive hostrocks containing calcite, sulphide minerals or devitrified glass may cause ore deposition by chemically buffering the hydrothermal solutions.

Origin: The QR deposit is related to a small, relatively "dry-looking", zoned alkalic stock. Fox $(1989,1991)$ has described the deposit as a "failed" porphyry system. He suggests that the gold is transported by a magmatic-source low density, low-salinity fluid rich in $\mathrm{CO}_{2}$. The
writers consider the deposit to be a product of a small geothermal cell with an evolving hydrothermal fluid. A magmatically derived fluid interacted with meteoric water and the mixture evolved, probably through fluid wallrock interaction with the chemically reactive calcareous siltstones. Melling et al. (1990) provide isotopic data that are consistent with older porphyry copper magmatic systems but some modification in carbon by wallrock interaction is indicated. The early alteration is associated with calcite (note the zeolite mineral wairakite should form in this environment but has not been recognized), then the $\mathrm{CO}_{2}$-depleted fluid reacts with the basalts to form propylite - mainly epidote, pyrite, chlorite and (?) tremolite with rare andradite garnet. This is not a retrogressively altered skarn because maximum temperatures of mineralization appear to be in the order of 200 to $300^{\circ} \mathrm{C}$. This low temperature produces prograde propylite mineral assemblages without any substantial amount of calc-silicate and silicate minerals typical of gold skarns such as garnet, pyroxene, wollastonite, vesuvianite, axinite, potassium-feldspar and biotite.

Exploration Guides: A distinctly anomalous geochemical signature of gold, arsenic, silver and copper are typically associated with the ore. Pathfinder elements in the hydrothermally altered rocks include zinc, molybdenum, vanadium, antimony and possibly lead, cadmium, bismuth, cobalt, magnesium and iron (Fox et al., 1987). Glacial till, soil and vegetation exploration geochemistry have been used effectively in this region of extensive glacial dispersion. Magnetic surveys have been effective exploration tools. Aeromagnetic highs can be used to detect the presence of intrusions, mainly the magnetite-rich dioritic stocks with which the propylitic alteration is associated. Some of the porphyry copper mineralization contains abundant hydrothermally derived magnetite.

Genetically affiliated mineralization may be manifest as intrusion-related auriferous vein, replacement and pyrite-sericite stockworks, manto and skarn deposits and porphyry coppergold or porphyry gold deposits, all in propylitic settings. Other deposits with similarities to the QR deposit are the 66 zone at the Milligan porphyry copper-gold deposit in British Columbia, and elsewhere the mantos such as Candelaria and Punta del Cobre, Chile.

Discussion: The QR deposit (and propylite gold deposits in general) appear to be related to mineralization by a (relatively) small volume of 'ponded hydrothermal fluid' related to emplacement of a small alkalic stock. There has been considerable interaction with ('buffering' by) the basaltic country rock to form abundant epidote and pyrite but no substantial amount of skarn. The hydrothermal system exemplifies a lithologically and structurally controlled mineralizing process in which adjacent permeable and impermeable lithologies form a fluid trap against a small, mineralizing intrusion. The West Zone, on the other hand, is largely a structural trap and forms a discrete copper-rich zone.

This type of propylitic alteration can be considered to be a subtype of skarn mineralization a prograde, low-temperature, auriferous epidote skarn. Unusual aspects that set the propylite model apart from other auriferous skarns are (G.E. Ray, personal communication, 1994): the association with alkalic rocks; the large amount of epidote with lack of pyroxene
and only trace of garnet; mineralization with pyrite, lesser magnetite and rare pyrrhotite suggesting an oxidized ore fluid; the high gold to silver ratio and overall low copper content.

This style of mineralization deserves to be identified as a deposit type that is distinct from the gold skarn model largely because it represents a new exploration opportunity. The mineralization has an unspectacular appearance in outcrop and generally has not been highly regarded as an exploration prospect. Many pyritic propylite occurrences, especially those in porphyry copper districts, might have been excluded from further investigation of their gold content.

### 7.0 MINERALIZATION, ALTERATION, VEINS

## Mineralization

At Kangaroo Property, pyrite and pyrrhotite occur disseminated in all rocks and in blebs and irregular narrow sulphide veins in the siltstones and basalt and in the intrusive rocks. The siltstones are usually rusty with reddish and yellowish brown gossan. Some fine sandy layers in the siltstones appear to be preferentially mineralized with sulphides 'stratabound' on a small scale. Massive pyrrhotite with chalcopyrite and pyrite occur in dark hornfelsic rock near intrusive contacts. Generally sulphides are greater near intrusive contacts, more abundant in the intruded rather than the intrusive rocks. Pyrrhotite is responsible for the magnetic quality of rocks commonly observed in core and outcrop. Magnetite is relatively rare.


#### Abstract

Alteration Pervasive calcite occurs very commonly in the basalts, and in the siltstones and volcaniclastics. Occasionally diorite reacts with acid, this was mainly due to the presence of fine calcite veinlets. Pervasive sericite occurs commonly in the intruded rocks, more intensely in gougy zones. Chlorite alteration is common, usually concentrated in chloritic fractures in the siltstones. Epidote is patchily common but rarely more than in trace amounts. The siltstones are generally primarily siliceous. Secondary pervasive silica alteration occurs locally and can be confused with the primarily silica in siltstones. Dark hornfelsic rock occurs with massive pyrrhotite occurs locally.


## Veins

Calcite veins predominate over quartz veins in the intrusive and intruded rocks. Blebby pyrrhotite and pyrite occur with the veins, mainly at selvages. These sulphides and chalcopyrite also occur in narrow sulphide veins and irregularly disseminated in the siltstones and basalts.

### 8.0 EXPLORATION PROGRAM, 2016

### 8.1 Sampling Method and Approach

Rock 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 http://www.niton.com/en/niton-analyzers-products/x|3/x|3t. An overview of sample analysis using energy dispersive X-ray fluorescence (EDXRF), adapted from the Niton website, is in Appendix A.

Most rock analyses were done at Barker Minerals' field office in Likely. Coordinates were collected at all sample locations. The coordinates are provided in Table No. 1. The rocks were analyzed in a manner to determine both their "high grade" and "low grade" values at each site, in order to minimize a "nugget" effect and to determine background values. The XRF analysis method does not replace laboratory assay. It detects the presence or absence of multiple elements in prospecting and, up to a certain point, the intensity of mineralization and correlation among elements in a specimen. The XRF is very useful in analysis for base economic and pathfinder metals though Au needs to be in relatively high grade in order to be detected by the XRF.

### 8.2 Kangaroo Project

## Overlook Road (Areas A, B, C)

Altogether 141 geochemical analyses were made of rocks in the Overlook Road area. The samples were collected from outcrops and float. Zn (up to 195 ppm ) and Cu (up to 1,030 ppm ) anomalies occurred in argillites and siltstones. Several very high results were got for gold in quartz. In Area A, 11.53 ppm and 12.61 ppm Au occurred. In Area B, 12.14 ppm and 12.18 ppm Au occurred. In Area C, 9.82 ppm, 10.84 ppm and 10.95 Au occurred. The high gold results often were accompanied by high values of zinc or copper.

### 8.3 Frank Creek Project

## Area A

Area A is located astride the 8400 Road below the level of the C Road branch. Altogether 136 geochemical analyses were made of rocks. The samples were collected from outcrops and float. Zn (up to 956 ppm), Cu (up to 855 ppm ), and Pb (up to 458 ppm ) anomalies occurred in argillites and siltstones. Thirteen analyses were highly anomalous in gold, ranging from 9.79 ppm to 501.2 ppm Au. These high gold results occurred in a $200 \mathrm{~m} \times 600$ m northeast-southwest area in quartz and altered argillites. The high gold results usually were accompanied by high values of zinc or copper and, less reliably, with molybdenum, arsenic or lead.

### 9.0 INTERPRETATION and CONCLUSIONS

The geology of the Kangaroo Project consists of sedimentary and volcanic rocks of the Upper Triassic to Lower Jurassic Nicola Group and associated intrusions, similar to lithologies at Cross Lake Minerals' QR mine, considered an Au skarn deposit. The QR gold mine, located 8.0 km WSW of the Barker Minerals' Kangaroo Project, is considered the possible model for mineralization explored for on the Kangaroo Project.

The widespread occurrence of highly anomalous gold values in rocks, in the Kangaroo and Frank Creek project areas accompanied by anomalous base metals require further prospecting and sampling.

### 10.0 RECOMMENDATIONS

More extensive and intensive prospecting and rock and soil sampling are required in the Kangaroo and Frank Creek areas examined in 2016 and outward.

APPENDIX A

Analytical Method

## Overview of sample analysis using energy dispersive X-ray fluorescenc 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 characterisitic 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 ${ }^{109} \mathrm{Cd}$ 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 B

## Glossary of Technical Terms and Abbreviations

## Glossary of Technical Terms and Abbreviations

| Ag | Silver. |
| :---: | :---: |
| 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. |
| As | Arsenic. |
| Au | Gold. |
| 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. |
| BCGS | British Columbia Geological Survey |
| Cd | Cadmium. |
| cm | Centimetre |
| Cu | Copper. |
| 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. |
| EM | Electromagnetic. |
| Float | Loose rocks or boulders; the location of the bedrock source is not known. |
| 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). |
|  | $34.29 \mathrm{~g} / \mathrm{t}$ (metric tonnes) $=1.00 \mathrm{oz} / \mathrm{T}$ (short tons) |
| Ha | Hectare - an area totalling 10,000 square metres, e.g., an area 100 metres by 100 metres. |
| HLEM | Horizontal loop electromagnetic. |
| Intrusive | A magmatic rock that cuts into and alters older rocks and may be the source of minerals deposited into the rocks intruded, creating skarn or porphyry type mineral deposits. |
| IP | Induced polarization. |
| km | Kilometre. |
| Mag/vlf | Magnetic and VLF-EM geophysical surveys. |
| Max-min | An HLEM technique to test for resistivity and conductivity of rocks. |
| Mo | Molybdenum. |
| MT | 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. |
| NW-SE | Northwest - southeast. |


| Orogen | The physical manifestations of the process of mountain building. Orogens are usually long, thin, arcuate tracts of rock that have a pronounced linear structure resulting in terranes. |
| :---: | :---: |
| oz/T | ounces per ton (Imperial measurement). |
|  | $34.29 \mathrm{~g} / \mathrm{t}$ (metric tonnes) $=1.00 \mathrm{oz} / \mathrm{T}$ (short tons) |
| oz/st | ounces per short ton (Imperial measurement, same as oz |
|  | $34.29 \mathrm{~g} / \mathrm{t}$ (metric tonnes) $=1.00 \mathrm{oz} / \mathrm{st}$ (short tons) |
| Pathfinder | Elements that occur in anomalous amounts together with the economic element being explored for. |
| PGE | Platinum group elements: platinum, palladium, osmium, iridium, rhodium, ruthenium. |
| Pb | Lead. |
| Porphyry | A deposit where primarily Cu-bearing minerals occur in disseminated grains or veinlets through a large volume of rock within or in close association with intrusive igneous rocks. Au and Mo are also important products of porphyry deposits. |
| ppb | Parts per billion. |
| ppm | Parts per million ( $1 \mathrm{ppm}=1,000 \mathrm{ppb}=1 \mathrm{~g} / \mathrm{t}$ ) |
| Protolith | The original rock before it was metamorphosed. |
| Pt | Platinum. |
| Skarn | Forms by chemical metasomatism of rocks in the contact zone of intrusive rocks with rocks often containing carbonate minerals. Skarns in the igneous environment are associated with hornfels and wider zones of calc-silicate rocks. Skarns are often hosts for copper, lead, zinc, iron, gold, molybdenum, tin, and tungsten ore deposits. |
| Sb | Antimony. |
| Takla Group | Takla Group has been applied to rocks identical to the Quesnel belt rocks...Equivalent rocks to the south...are generally referred to as Nicola Group... The term Takla leads to ambiguity because in northern British Columbia it has been used for rocks in both Quesnel and Stikine terranes...The usage for the Triassic-Jurassic volcanic arc and related rocks in Quesnellia currently preferred is Nicola Group. The term Takla Group possibly should be discarded... (Panteleyev et al., (1996). |
| Terrain | An arbitrarily defined geographic location. |
| Terrane | A major crustal block with a particular geologic history. (See Section 9.0 for more). |
| VLF-EM | Very low frequency electromagnetic. |
| XRF | X-ray fluorescence. |
| Zn | Zinc |

APPENDIX C

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## APPENDIX D

## Adjacent Properties

QR Gold Mine
Cariboo Property

## ADJACENT PROPERTIES

## QR Gold Mine

The following information on QR Mine is mainly from Gillstrom (2003) and Simpson (2005). Some additional information is added from Minfile 093A 121 and Mineral Deposit Type K04 (Au skarns) of the BC Geological Survey.

The QR gold mine is located 8.0 km WSW of the Barker Minerals' Kangaroo Property. The deposit was first staked in 1975 by Dome Exploration and Newconex Exploration during a regional reconnaissance program. The property has been continuously drilled by various owners since 1981. In 1992 the property was acquired by CMP Resources. The following year Kinross Gold Corp. was formed from CMP and two other companies. In 1995 mining of the Main Zone started; a 5 year mine life was projected. In 1998 mining was suspended due to low gold prices. Kinross reported processing 1.06 million tonnes averaging $4.1 \mathrm{~g} / \mathrm{t}$ gold, with 118,004 ounces of gold produced. In 2004 Cross Lake Minerals Ltd. acquired 100\% interest in the property. In 2005 N143-101 compliant updated resource estimates for three of the five known zones of the QR deposit were summarized (below):

Table No. 3 QR Deposit Resource Summary
Measured Resources

|  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :---: | :---: |
|  | Cutoff |  |  |  |  |  |
| Zone | g/t Au Tonnes | Au g/t oz Au |  |  |  |  |
| Midwest | 3.0 | 11,465 | 5.67 | 2,089 |  |  |

## Indicated Resources

Cutoff
Zone g/t Au Tonnes Au g/t oz Au

| Northwest | 1.6 | 122,417 | 3.58 | 14,078 |
| :--- | :--- | :--- | :--- | :--- |


| West | 1.6 | 355,907 | 5.07 | 58,037 |
| :--- | :--- | :--- | :--- | :--- |


| Midwest | 3.0 | 180,712 | 5.54 | 32,164 |
| :--- | :--- | :--- | :--- | :--- |

## Combined Measured and Indicated Resources

|  | Cutoff |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Zone | g/t Au Tonnes |  |  | Au g/t oz Au |  |
| Northwest | 1.6 | 122,417 | 3.58 | 14,078 |  |
| West | 1.6 | 355,907 | 5.07 | 58,037 |  |
| Midwest | 3.0 | 192,176 | 5.54 | 34,255 |  |

The North Zone was considered to have potential to host significant tonnage and further drilling was recommended.

Cross Lake started up full operations and poured their first gold on November 24, 2007. The QR mill is rated to operate at 900 tonnes per day. In June, 2007 BC Hydro began construction of a now-complete, $\$ 2.1$ million power line to the mine which considerably reduced operating
costs compared to the Kinross days. (The Northern Miner, Vol. 93, No. 45, Dec 31, 2007 - Jan $6,2008)$.

In 2008 Cross Lake Minerals made the decision to temporarily shut the operation in January, 2009 to allow management of Cross Lake Minerals to review the economics and reserves of the operation.

## Regional Geology

The QR property lies within the Quesnel Trough, a northwesterly trending island arc assemblage comprised of volcanic and marine sedimentary units of late Triassic to early Jurassic age, including the Takla Group in the QR area. The Takla Group is cut by late Triassic to Early Jurassic intrusions at regularly spaced intervals forming a linear belt within the Quesnel Trough. A number of these intrusions are zoned, including the QR stock, and are known to host alkaline suite Cu and $\mathrm{Cu}-\mathrm{Au}$ deposits including the Mt. Polley Mine 15 km to the southeast.

## Local and Property Geology

The QR property is underlain by a south-dipping sequence of alkali basalts, calcareous tuffite and calcareous mudstone of the Takla Group. The alkali basalt unit is comprised of massive flows, monolithic breccia and minor wacke, sanstone and pillow breccia and flows.

The basalt unit grades upward into a basaltic tuff and pyritic tuffite. This unit locally forms a massive carbonate rock in the Main Zone footwall. Pyrite forms up to $10 \%$ of the matrix and 5$20 \%$ of the total unit. Where altered and skarned, the tuffite unit is the primary host to all the Au deposits on the property with the exception of the Northwest Zone.

The tuffite is overlain by a sequence of calcareous mudstone, black argillite and tuff. Near the QR deposit this unit is predominantly volcaniclastic with hornfels developed near the intrusion. This unit contains up to $10 \%$ disseminated pyrite.

The Takla Group sequence is intruded by the QR stock. It is mainly monzonitic in composition with a dioritic margin. The stock measures $1 \mathrm{~km} \mathrm{~N}-\mathrm{S}$ and 1.5 km E-W.

## Deposit Type

The QR deposit is considered a porphyry-related propylite gold skarn, with the majority of the gold associated with sulphide mineralization in an epidote rich propylitic alteration halo around the QR stock.

## Mineralization

Mineralization has a strong spatial relationship to both the siltstone-volcanic contact and the alteration front. The ore grade mineralization generally occurs within 50 m of the epidote alteration front and 150 to 300 m from the contact with the intrusive rocks.
Sulphide mineralization varies from $1 \%$ to $15 \%$ and consists of pyrite and pyrrhotite with minor amounts of chalcopyrite, galena and sphalerite. The gold mineralization and propylitic alteration generally occur in and along the contact between the lower calcareous basalt and upper mudstones and argillites except at the Northwest Zone where the mineralization occurs within
the siltstone/argilite unit and between several prominent dikes. Faulting has displaced the mineralization into five known zones.

The Main Zone is pod-shaped, 280 m long and extends 100 m below the surface where it is truncated by a fault. The mineralization in this zone is a green to grey propylitically altered carbonate and pyrite rich rocks, with minor pyrrhotite and rare chalcopyrite.

The Midwest Zone strikes at $110^{\circ}$ and dips steeply south. Propylitic mineralization follows the basalt/siltstone contact. Most of the surface mining by Kinross came from the Main and Midwest Zones.

The Northwest Zone occurs within the siltstones and argillites. This flat lying zone strikes $110^{\circ}$ and is approximately 350 m long, 50 to 75 m wide and is from 10 to 15 m thick.

The West Zone follows the basalt/siltstone contact for 450 m . It is approximately 60 m wide and 5 to 15 m thick. The mineralization consists of green to black/green propylite, with $5-15 \%$ pyrite. As in the other zones, the amount of pyrite is a general indication of gold grade. Coarse gold, up to 1 mm in diameter, has been observed in drill core from the West Zone.

The North Zone is an extensive area of propylitically altered basalt lying below the Main Zone. The North Zone is the largest zone of Au mineralization on the property with a drill indicated strike length of at least 1 km . The North Zone and the small East Zone have grade comparable to the other Zones but the mineralization is too deep to be of economic interest at present.

The Main, North, Midwest and Northwest deposit zones occur on the north side of the QR stock; the West zone is on the west side of the stock.

## Cariboo Property

The exploration of Cross Lake Minerals' Cariboo property is documented in the publicly available BCGS Assessment Reports (Nos. 10650, 11556, 12512, 13881, 16018, 19324, 19597, 26933, 27418) and the Technical Report by Church, (2003).

Cross Lake Minerals' Cariboo property ( 149 cells or units, 3,179 hectares) is located approximately 2 km east of their QR gold mine and is adjacent to the west side of Barker Minerals' Kangaroo Property. The Cariboo property was staked in 1981 to cover an As anomaly on a west flowing tributary of Maude Creek. From 1982 to 2003 Geological mapping, soil and geophysical surveys, trenching and drilling have been done on the property.

In 1985 and '86 IP geophysical surveys located several chargeability anomalies, including a large area of high chargeability on the East Grid. Soils on the East Grid had several E-W trending gold anomalies with values up to 525 ppb. Soil sampling in 1989 extended eastward a gold anomaly that was targeted by drill hole C-89-6 that year.

Ten drill holes ( $1,751 \mathrm{~m}$ ) were done in 1989 and 7 holes (1,421 m) in 2003. In the 1989 drilling, hole C-89-6 had $5.26 \mathrm{~g} / \mathrm{t}$ Au over 8.5 m , among several anomalous gold intervals, in a wide zone of silica alteration. This hole is located approximately 400 m west of Barker Minerals' claim boundary.

In the 2003 drilling, anomalous Au occurred in 2 holes:
C-03-12: $3.17 \mathrm{~g} / \mathrm{t}$ over 2.12 m
C-03-13: $2.03 \mathrm{~g} / \mathrm{t}$ over 2.69 m
C-03-13: $1.71 \mathrm{~g} / \mathrm{t}$ over 2.83 m
anomalous Cu and Mo in 3 holes:
C-03-15: 0.06\% Cu and 0.02\% Mo over 58.86 m .
C-03-16: 0.05\% Cu and 0.02\% Mo over 20.46 m.
C-03-17: 0.067\% Cu and 0.03\% Mo over 27.2 m.
Trenching in 2002 exposed volcanic tuff with the best Au intersection having $2.24 \mathrm{~g} / \mathrm{t}$ over 3.0 m .

Au mineralization occurred in silicified and carbonatized shear zones in a tuff unit. Elevated Au values appeared directly related to the presence of arsenopyrite, mineralization observed in core.

Two main northwest-southeast trending [soil] geochemical anomalies were identified. The southern anomaly contains elevated values of $\mathrm{Au}, \mathrm{Cu}, \mathrm{Sb}$, and As and covers the area drilled by DDH C-89-6 that contained elevated Au values. The narrower northern anomaly has a signature of elevated $A u, C u$, and Mo values and overlies a strong IP chargeability high and magnetic high. The geochemical anomalies are generally most intense in the eastern part of the survey area and decrease to the west possibly reflecting the effects of glacial transport and dispersion. This zone of broadly coincident geochemical and geophysical anomalies trends all the way to the eastern boundary of the surveys which roughly coincides with the Cross LakeBarker Minerals claim boundary. (McKinley, 2004, pg. 45-46).
(Figure Nos. 18-21 below show DDH C-89-6 location relative to geochemical and geophysical anomalies on Cross Lake's Cariboo property which may trend onto Barker Minerals' Kangaroo property, adjacent to the east.)


Figure No. 18 Cariboo Property - Au in Soils (after Curch, 2003)


Figure No. 20 Cariboo Property - Mo in Soils (after Curch, 2003)


Figure No. 19 Cariboo Property - As in Soils (after Curch, 2003)


Figure No. 21 Cariboo Property - Chargeability (after Curch, 2003)

APPENDIX E

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.
3. 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.
5. I carried out or supervised work described in this report.
R. Turna, P.Geo.

December 20, 2016

APPENDIX F

STATEMENT of EXPENDITURES

## Barker Minerals Ltd.

Work was completed between May 1 and July 15, 2016
Work was done on claim \#'s 1038868 \& 1038885

## Event \# 5611042

Kangaroo - Frank Creek Properties - Geochemical - Field

|  | Date | Days | Rate |  | Sub-total |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Louis Doyle |  |  |  |  |  |
| Rock sample collections | May 7, 2016 | 1 | \$ 600.00 | \$ | 600.00 |
| Rock sample collections | May 8, 2016 | 1 | \$ 600.00 | \$ | 600.00 |
| Rock sample collections | May 9, 2016 | 1 | \$ 600.00 | \$ | 600.00 |
| Rock sample collections | May 10, 2016 | 1 | \$ 600.00 | \$ | 600.00 |
| Room \& board |  | 4 | \$ 150.00 | \$ | 600.00 |
| Vehicle \& gas |  | 4 | \$ 150.00 | \$ | 600.00 |
| Brian Hall |  |  |  |  |  |
| Rock sample collections | May 7, 2016 | 1 | \$ 500.00 | \$ | 500.00 |
| Rock sample collections | May 8, 2016 | 1 | \$ 500.00 | \$ | 500.00 |
| Rock sample collections | May 9, 2016 | 1 | \$ 500.00 | \$ | 500.00 |
| Rock sample collections | May 10, 2016 | 1 | \$ 500.00 | \$ | 500.00 |
| Room \& board |  | 4 | \$ 150.00 | \$ | 600.00 |
| Louis Doyle |  |  |  |  |  |
| Rock sample preparation \& descriptions | May 11, 2016 | 1 | \$ 600.00 | \$ | 600.00 |
| Rock sample preparation \& descriptions | May 12, 2016 | 1 | \$ 600.00 | \$ | 600.00 |
| Room \& board |  | 2 | \$ 150.00 | \$ | 300.00 |
| Brian Hall - XRF operator |  |  |  |  |  |
| XRF analysis | May 22, 2016 | 1 | \$ 500.00 | \$ | 500.00 |
| XRF analysis | May 23, 2016 | 1 | \$ 500.00 | \$ | 500.00 |
| XRF analysis | May 24, 2016 | 1 | \$ 500.00 | \$ | 500.00 |
| XRF analysis | May 25, 2016 | 1 | \$ 500.00 | \$ | 500.00 |
| Room \& board |  | 4 | \$ 150.00 | \$ | 600.00 |
| XRF Rental |  | 8 | \$ 200.00 | \$ | 1,600.00 |
|  |  |  |  | \$ | 11,900.00 |
| Kangaroo - Frank Creek Properties - Travel to/from |  |  |  |  |  |
| Louis Doyle |  |  |  |  |  |
| Travel to/from | May 13, 2016 | 1 | \$ 600.00 | \$ | 600.00 |
| Room \& board |  | 1 | \$ 150.00 | \$ | 150.00 |
| Vehicle \& gas |  | 1 | \$ 150.00 | \$ | 150.00 |

## Barker Minerals Ltd.

Work was completed between May 1 and July 15, 2016

## Work was done on claim \#'s 1038868 \& 1038885

Event \# 5611042
Kangaroo - Frank Creek Properties -Travel to/from (continued)
Brian Hall
Travel to/from
Room \& board
Vehicle \& gas

| May 13, 2016 | 1 | $\$ 500.00$ | $\$$ | 500.00 |
| :--- | ---: | ---: | ---: | ---: |
|  | 1 | $\$ 150.00$ | $\$$ | 150.00 |
|  | 1 | $\$ 150.00$ | $\$$ | 150.00 |
|  | Sub-total | $\$$ | $\mathbf{1 , 7 0 0 . 0 0}$ |  |

Kangaroo - Frank Creek Properties - Misc. expenditures
Safety equipment (MTC), exploration supplies \& equipment, communication devices \& quad
Exploration supplies \& equipment
MTC rental
8 \$ 150.00 \$
Communication devices

| Hand held radios | 7 | $\$$ | 7.00 | $\$$ | 49.00 |
| :--- | :--- | :--- | ---: | :--- | ---: |
| Satelite phones | 7 | $\$$ | 12.00 | $\$$ | 84.00 |
| Spot emergency locators | 7 | $\$$ | 5.00 | $\$$ | 35.00 |
|  |  | Sub-total |  |  |  |
|  | $\$$ | $\mathbf{1 , 6 8 8 . 0 0}$ |  |  |  |

Kangaroo - Frank Creek Properties Expenditure Summary

| Geochemical Sub-total | $\$$ | $11,900.00$ |
| ---: | ---: | ---: |
| Travel to/from Sub-total | $\$$ | $1,700.00$ |
| Misc. Expenditures Sub-total | $\$$ | $1,688.00$ |
|  |  | $15,288.00$ |

## Barker Minerals Ltd.

Work was completed between May 15 and October 8, 2016
Work was done on claim \#'s 1038868 \& 1038885

## Event \# 5622105

## Kangaroo - Frank Creek Properties - Office

Rein Turna - Geologist

| Report writing, maps and managing | 4 | $\$ 600.00$ | $\$$ | $2,400.00$ |
| :--- | ---: | ---: | ---: | ---: |
| Room \& board | 4 | $\$ 150.00$ | $\$$ | 600.00 |
| Louis Doyle |  |  |  |  |
| Planning and managing | 1 | $\$ 600.00$ | $\$$ | 600.00 |
| Room \& board | 1 | $\$ 150.00$ | $\$$ | 150.00 |
|  |  |  | $\$$ | $\mathbf{3 , 7 5 0 . 0 0}$ |

## Kangaroo - Frank Creek Properties - Geochemical - Field

## Louis Doyle

Rock sample collections
Rock sample collections
Rock sample collections
Rock sample collections
Rock sample collections
Rock sample collections
Room \& board
Vehicle \& gas

## Brian Hall

Rock sample collections
Rock sample collections
Rock sample collections
Rock sample collections
Rock sample collections
Rock sample collections
Room \& board

## Louis Doyle

Rock sample preparation \& descriptions
Rock sample preparation \& descriptions
XRF assistant
Room \& board

Days Rate
Sub-total

| July 5, 2016 | 1 | $\$ 600.00$ | $\$$ | 600.00 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| July 6, 2016 | 1 | $\$ 600.00$ | $\$$ | 600.00 |
| July 7, 2016 | 1 | $\$ 600.00$ | $\$$ | 600.00 |
| July 8, 2016 | 1 | $\$ 600.00$ | $\$$ | 600.00 |
| July 9, 2016 | 1 | $\$ 600.00$ | $\$$ | 600.00 |
| July 10, 2016 | 1 | $\$ 600.00$ | $\$$ | 600.00 |
|  | 6 | $\$ 150.00$ | $\$$ | 900.00 |
|  | 6 | $\$ 150.00$ | $\$$ | 900.00 |


| July 5, 2016 | 1 | $\$ 500.00$ | $\$$ | 500.00 |
| :--- | :--- | :--- | :--- | :--- |
| July 6, 2016 | 1 | $\$ 500.00$ | $\$$ | 500.00 |
| July 7, 2016 | 1 | $\$ 500.00$ | $\$$ | 500.00 |
| July 8, 2016 | 1 | $\$ 500.00$ | $\$$ | 500.00 |
| July 9, 2016 | 1 | $\$ 500.00$ | $\$$ | 500.00 |
| July 10, 2016 | 1 | $\$ 500.00$ | $\$$ | 500.00 |
|  | 6 | $\$ 150.00$ | $\$$ | 900.00 |


| July 11, 2016 | 1 | $\$ 600.00$ | $\$$ | 600.00 |
| :--- | :--- | :--- | :--- | :--- |
| July 12, 2016 | 1 | $\$ 600.00$ | $\$$ | 600.00 |
| July 13, 2016 | 1 | $\$ 600.00$ | $\$$ | 600.00 |
|  | 3 | $\$ 150.00$ | $\$$ | 450.00 |

## Barker Minerals Ltd.

Work was completed between May 15 and October 8, 2016
Work was done on claim \#'s 1038868 \& 1038885
Event \# 5622105
Kangaroo - Frank Creek Properties - Geochemical - Field - (continued)
Date Days Rate Sub-total

| Brian Hall - XRF operator |  |
| :--- | :--- |
| XRF analysis | July 11, 20 |
| XRF analysis | July 12, 20 |
| XRF analysis | July 13, 20 |
| Room \& board |  |
| XRF Rental |  |
|  |  |
| Kangaroo - Frank Creek Properties - Travel tolfrom |  |

Louis Doyle

Travel to/from
Travel to/from
Room \& board
Vehicle \& gas
Brian Hall
Travel to/from
Travel to/from
Room \& board
Vehicle \& gas

| July 4, 2016 | 1 | $\$ 600.00$ | $\$$ | 600.00 |
| :---: | :---: | :---: | :---: | :---: |
| July 15, 2016 | 1 | $\$ 600.00$ | $\$$ | 600.00 |
|  | 2 | $\$ 150.00$ | $\$$ | 300.00 |
|  | 2 | $\$ 150.00$ | $\$$ | 300.00 |
|  |  |  |  |  |
| July 4, 2016 | 1 | $\$ 500.00$ | $\$$ | 500.00 |
| July 15, 2016 | 1 | $\$ 500.00$ | $\$$ | 500.00 |
|  | 2 | $\$ 150.00$ | $\$$ | 300.00 |
|  | 2 | $\$ 150.00$ | $\$$ | 300.00 |
|  |  | Sub-total | $\$$ | $\mathbf{3 , 4 0 0 . 0 0}$ |

Kangaroo - Frank Creek Properties - Misc. expenditures
Safety equipment (MTC), exploration supplies \& equipment, communication devices \& quad

| Exploration supplies \& equipment |  |  | $\$$ | 465.00 |  |
| :--- | ---: | ---: | ---: | ---: | ---: |
| MTC rental | 9 | $\$ 150.00$ | $\$$ | $1,350.00$ |  |
| Communication devices |  |  |  |  |  |
| Hand held radios | 7 | $\$$ | 7.00 | $\$$ | 49.00 |
| Satelite phones | 7 | $\$ 12.00$ | $\$$ | 84.00 |  |
| Spot emergency locators | 7 | $\$$ | 5.00 | $\$$ | 35.00 |
|  |  | Sub-total | $\$$ | $\mathbf{1 , 9 8 3 . 0 0}$ |  |

## Kangaroo - Frank Creek Properties Expenditure Summary

| Office Sub-total | $\$$ | $3,750.00$ |
| ---: | ---: | ---: |
| Geochemical Sub-total | $\$$ | $15,300.00$ |
| Travel to/from Sub-total | $\$$ | $3,400.00$ |
| Misc. Expenditures Sub-total | $\$$ | $1,983.00$ |
| Kangaroo - Frank Creek Properties - Expenditure Total | $\$ 1$ | $24,433.00$ |

## Barker Minerals Ltd.

Work was completed between July 15 and December 31, 2016
Work was done on claim \#'s 1038868 \& 1038885
Event \# 5632328

| Kangaroo - Frank Creek Properties - Office |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Rein Turna-Geologist |  |  |  |  |
| Report writing, maps and managing | 7 | \$ 600.00 | \$ | 4,200.00 |
| Room \& board | 7 | \$ 150.00 | \$ | 1,050.00 |
| Louis Doyle |  |  |  |  |
| Managing \& interpretation | 3 | \$ 600.00 | \$ | 1,800.00 |
| Room \& board | 3 | \$ 150.00 | \$ | 450.00 |
| Colleen Doyle |  |  |  |  |
| Report compilation \& filing | 2 | \$ 350.00 | \$ | 700.00 |
| Room \& board | 2 | \$ 150.00 | \$ | 300.00 |
|  |  |  | \$ | 8,500.00 |
| Kangaroo - Frank Creek Properties Expenditure Summary |  |  |  |  |
|  | Offi | Sub-total | \$ | 8,500.00 |
| Kangaroo - Frank Creek Properties - Exp | xpen | ture Total | \$ | 8,500.00 |

APPENDIX G

Rock Sample Descriptions and Coordinates

Table No. 2
Sample Coordinates and Descriptions

## XRF No. Sample No. Fig. No. / Area Easting Northing Type Sample Descrir

$$
\begin{array}{ll}
\text { OC or FL } & \text { Po }=\text { pyrrhotite } \\
& P y=\text { pyrite } \\
& C p y=\text { chalcopyrite } \\
& Y, N=\text { Yes, No }
\end{array}
$$

Kangaroo Over Look Rd - 2016 Rock Sampling
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Fig. 9 / Area A
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| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |  |
| 592586 | 5838048 | FL | Y | Rusty | PO, PY | Rock Type |
| 592587 | 5838047 | FL | Y | Rusty | PO, PY | Sandstone |
| 592588 | 5838046 | FL | Y | Rusty | PO, PY | Sandstone |
| 592550 | 5838026 | FL | Y | Rusty | PO, PY | Sandstone |
| 592551 | 5838025 | FL | Y | Rusty | PO, PY | Sandstone |
| 592552 | 5838024 | FL | Y | Rusty | PO, PY | Sandstone |
| 592550 | 5838026 | FL | N | Bluish | PY | Siltstone |
| 592551 | 5838025 | FL | N | Bluish | PY | Siltstone |
| 592552 | 5838024 | FL | N | Bluish | PY | Siltstone |
| 592550 | 5838026 | FL | N | Bluish | PY | Siltstone |
| 592551 | 5838025 | FL | N | Bluish | PY | Siltstone |
| 592552 | 5838024 | FL | N | Bluish | PY | Siltstone |
| 592560 | 5838074 | FL | N | Bluish | PY | Siltstone |
| 592561 | 5838073 | FL | N | Bluish | PY | Siltstone |
| 592562 | 5838072 | FL | N | Bluish | PY | Siltstone |
| 592538 | 5838095 | FL | N | Black | PY | Shale/siltstone |
| 592539 | 5838094 | FL | N | Black | PY | Shale/siltstone |
| 592540 | 5838093 | FL | N | Black | PY | Shale/siltstone |
| 592552 | 5838106 | FL | N | Black | PY | Shale/siltstone |
| 592553 | 5838105 | FL | N | Black | PY | Shale/siltstone |
| 592554 | 5838104 | FL | N | Black | PY | Shale/siltstone |
| 592499 | 5838138 | FL | Y | Rusty | PO, PY | Sandstone |
| 592500 | 5838137 | FL | Y | Rusty | PO, PY | Sandstone |
| 592501 | 5838136 | FL | Y | Rusty | PO, PY | Sandstone |
| 592483 | 5838132 | FL | Y | Rusty | PO, PY | Sandstone |
| 592484 | 5838131 | FL | Y | Rusty | PO, PY | Sandstone |
| 592485 | 5838130 | FL | Y | Rusty | PO, PY | Sandstone |
| 592466 | 5838137 | FL | N | Black | PY | Shale/siltstone |
| 592467 | 5838136 | FL | N | Black | PY | Shale/siltstone |
| 592468 | 5838135 | FL | N | Black | PY | Shale/siltstone |
| 592452 | 5838123 | FL | Y | Rusty | PO, PY | Sandstone |
| 592453 | 5838122 | FL | Y | Rusty | PO, PY | Sandstone |
| 592454 | 5838121 | FL | Y | Rusty | PO, PY | Sandstone |
| 592445 | 5838150 | FL | Y | Rusty | PO, PY | Sandstone |
| 592446 | 5838149 | FL | Y | Rusty | PO, PY | Sandstone |

Table No. 2
Sample Coordinates and Descriptions

| XRF No. | Sample No. | Fig. No. / Area | Easting | Northing Type | Sam | scrir |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 457 | kang cr ov(l 12b | Fig. 9 / Area A | 592447 | 5838148 FL | Y | Rusty | PO, PY | Sandstone |
| 458 | kang cr ov(l 13 | Fig. 9 / Area A | 592453 | 5838165 FL | N | Black | PY | Shale/siltstone |
| 459 | kang cr ov(l 13a | Fig. 9 / Area A | 592454 | 5838164 FL | N | Black | PY | Shale/siltstone |
| 460 | kang cr ov(l 13b | Fig. 9 / Area A | 592455 | 5838163 FL | N | Black | PY | Shale/siltstone |
| 461 | kang cr ov(l 14 | Fig. 10 / Area B | 592438 | 5838180 SUB/OC | N | Green | PY | Andesitic volcaniclastics |
| 462 | kang cr ov(l 14a | Fig. 10 / Area B | 592439 | 5838179 SUB/OC | N | Green | PY | Andesitic volcaniclastics |
| 463 | kang cr ov(l 14b | Fig. 10 / Area B | 592440 | 5838178 SUB/OC | N | Green | PY | Andesitic volcaniclastics |
| 464 | kang cr ov(l 15 | Fig. 10 / Area B | 592405 | 5838193 SUB/OC | N | Green | PY | Andesitic volcaniclastics |
| 465 | kang cr ov(l 15a | Fig. 10 / Area B | 592406 | 5838192 SUB/OC | N | Green | PY | Andesitic volcaniclastics |
| 466 | kang cr ov(l 15b | Fig. 10 / Area B | 592407 | 5838191 SUB/OC | N | Green | PY | Andesitic volcaniclastics |
| 467 | kang cr ov(l 16 | Fig. 10 / Area B | 592411 | 5838240 SUB/OC | N | Green | PY | Andesitic volcaniclastics |
| 468 | kang cr ov(l 16a | Fig. 10 / Area B | 592412 | 5838239 SUB/OC | N | Green | PY | Andesitic volcaniclastics |
| 469 | kang cr ov(l 16b | Fig. 10 / Area B | 592413 | 5838238 SUB/OC | N | Green | PY | Andesitic volcaniclastics |
| 470 | kang cr ov(l 16b | Fig. 10 / Area B | 592414 | 5838237 SUB/OC | N | Green | PY | Andesitic volcaniclastics |
| 471 | kang cr ov(l 17a | Fig. 10 / Area B | 592397 | 5838249 SUB/OC | N | Green | PY | Andesitic volcaniclastics |
| 472 | kang cr ov(l 17b | Fig. 10 / Area B | 592398 | 5838248 SUB/OC | N | Green | PY | Andesitic volcaniclastics |
| 473 | kang cr ov(l 18 | Fig. 10 / Area B | 592384 | 5838256 SUB/OC | N | Green | PY | Andesitic volcaniclastics |
| 474 | kang cr ov(l 18a | Fig. 10 / Area B | 592385 | 5838255 SUB/OC | N | Green | PY | Andesitic volcaniclastics |
| 475 | kang cr ov(l 18b | Fig. 10 / Area B | 592386 | 5838254 SUB/OC | N | Green | PY | Andesitic volcaniclastics |
| 476 | kang cr ov(l 19 | Fig. 10 / Area B | 592375 | 5838258 SUB/OC | N | Green | PY | Andesitic volcaniclastics |
| 477 | kang cr ov(l 19a | Fig. 10 / Area B | 592376 | 5838257 SUB/OC | N | Green | PY | Andesitic volcaniclastics |
| 478 | kang cr ov(l 19b | Fig. 10 / Area B | 592377 | 5838256 SUB/OC | N | Green | PY | Andesitic volcaniclastics |
| 479 | kang cr ov(l 20 | Fig. 10 / Area B | 592377 | 5838273 SUB/OC | N | Green | PY | Andesitic volcaniclastics |
| 480 | kang cr ov(l 20a | Fig. 10 / Area B | 592378 | 5838272 SUB/OC | N | Green | PY | Andesitic volcaniclastics |
| 481 | kang cr ov(l 20b | Fig. 10 / Area B | 592379 | 5838271 SUB/OC | N | Green | PY | Andesitic volcaniclastics |
| 482 | kang cr ov(l 21 | Fig. 10 / Area B | 592386 | 5838267 SUB/OC | N | Green | PY | Andesitic volcaniclastics |
| 483 | kang cr ov(l 21a | Fig. 10 / Area B | 592387 | 5838266 SUB/OC | N | Green | PY | Andesitic volcaniclastics |
| 484 | kang cr ov(l 21b | Fig. 10 / Area B | 592388 | 5838265 SUB/OC | N | Green | PY | Andesitic volcaniclastics |
| 485 | kang cr ov(l 22 | Fig. 10 / Area B | 592398 | 5838267 SUB/OC | N | Black | PY | Shale/siltstone |
| 486 | kang cr ov(l 22a | Fig. 10 / Area B | 592399 | 5838266 SUB/OC | N | Black | PY | Shale/siltstone |
| 487 | kang cr ov(l 22 b | Fig. 10 / Area B | 592400 | 5838265 SUB/OC | N | Black | PY | Shale/siltstone |
| 488 | kang cr ov(l 23 | Fig. 10 / Area B | 592410 | 5838266 SUB/OC | N | Black | PY | Shale/siltstone |
| 489 | kang cr ov(l 23a | Fig. 10 / Area B | 592411 | 5838265 SUB/OC | N | Black | PY | Shale/siltstone |
| 490 | kang cr ov(l 23b | Fig. 10 / Area B | 592412 | 5838264 SUB/OC | N | Black | PY | Shale/siltstone |
| 491 | kang cr ov(l 24 | Fig. 10 / Area B | 592412 | 5838273 SUB/OC | N | Black | PY | Shale/siltstone |
| 492 | kang cr ov(l 24a | Fig. 10 / Area B | 592413 | 5838272 SUB/OC | N | Black | PY | Shale/siltstone |
| 493 | kang cr ov(l 24 b | Fig. 10 / Area B | 592414 | 5838271 SUB/OC | N | Black | PY | Shale/siltstone |
| 494 | kang cr ov(l) 25 | Fig. 10 / Area B | 592426 | 5838274 SUB/OC | N | Black | PY | Shale/siltstone |
| 495 | kang cr ov(l 25a | Fig. 10 / Area B | 592427 | 5838273 SUB/OC | N | Black | PY | Shale/siltstone |
| 496 | kang cr ov(l 25b | Fig. 10 / Area B | 592428 | 5838272 SUB/OC | N | Black | PY | Shale/siltstone |
| 497 | kang cr ov(l 26 | Fig. 10 / Area B | 592421 | 5838279 SUB/OC | N | Black | PY | Shale/siltstone |
| 498 | kang cr ov(l 26a | Fig. 10 / Area B | 592422 | 5838278 SUB/OC | N | Black | PY | Shale/siltstone |
| 499 | kang cr ov(l 26b | Fig. 10 / Area B | 592423 | 5838277 SUB/OC | N | Black | PY | Shale/siltstone |
| 500 | kang cr ov(l 27 | Fig. 10 / Area B | 592411 | 5838282 SUB/OC | N | Black | PY | Shale/siltstone |
| 501 | kang cr ov(l 27 a | Fig. 10 / Area B | 592412 | 5838281 SUB/OC | N | Black | PY | Shale/siltstone |
| 502 | kang cr ov(l 27b | Fig. 10 / Area B | 592413 | 5838280 SUB/OC | N | Black | PY | Shale/siltstone |

Table No. 2
Sample Coordinates and Descriptions

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Sample No. Fig. No. / Area kang cr ov(l) 28 kang cr ov(l 28a kang cr ov(l 28b kangcr o(l 29 kangcr o(l 29a kangcr o(l 29b kangcr o(l 30 kangcr o(l 30a kangcr o(l 30b kangcr o(l 31 kangcr o(l 31a kangcr o(l 31b kangcr o(l 32 kangcr o(132a kangcr o(l 32b kangcr o(l 33 kangcr o(l 33a kangcr o(I 33b kangcr o(l 34 kangcr o(l 34a kangcr o(l 34b kangcr o(l 35 kangcr o(1 35a kangcr o(l 35b kangcr o(l 36 kangcr o(l 36a kangcr o(l 36b kangcr o(l 37 kangcr o(l 37a kangcr o(l 37b kangcr o(l 38 kangcr o(l 38a kangcr o(l 38b kangcr o(l 39 kangcr o(l 39a kangcr o(I 39b kangcr o(l 40 kangcr o(1 40a kangcr o(l 40b kangcr o(l 41 kangcr o(l 41a kangcr o(l 41b kangcr o(l 42 kangcr o(1 42a kangcr o(l 42b kangcr o(l 43

Fig. 10 / Area B
Fig. 10 / Area B
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Easting Northing Type Sample Descrir
5923935838284 SUB/OC N Black
5923945838283 SUB/OC N Black 5923955838282 SUB/OC N Black 5924005838291 SUB/OC N Green 5924015838290 SUB/OC N Green 5924025838289 SUB/OC N Green 5923825838290 SUB/OC N Green 5923835838289 SUB/OC N Green 5923845838288 SUB/OC N Green 5923665838285 SUB/OC N Green 5923675838284 SUB/OC N Green 5923685838283 SUB/OC N Green 5924045838296 SUB/OC N Green 5924055838295 SUB/OC N Green 5924065838294 SUB/OC N Green 5924115838299 SUB/OC N Green 5924125838298 SUB/OC N Green 5924135838297 SUB/OC N Green 5923965838269 SUB/OC N Green 5923975838268 SUB/OC N Green 5923985838267 SUB/OC N Green 5924165838347 SUB/OC N Green 5924175838346 SUB/OC N Green 5924185838345 SUB/OC N Green 5924015838353 FL Y Rusty 5924025838352 FL Y Rusty 5924035838351 FL Y Rusty $\begin{array}{llll}592303 & 5838363 & \text { FL } & Y \\ \text { Rusty }\end{array}$ 5923045838362 FL Y Rusty 5923055838361 FL Y Rusty $\begin{array}{llll}592309 & 5838407 & \text { FL } & \text { Y Rusty }\end{array}$ 5923105838406 FL Y Rusty 5923115838405 FL Y Rusty 5924245838402 FL Y Rusty 5924255838401 FL Y Rusty 5924265838400 FL Y Rusty 5924185838412 SUB/OC N Green 5924195838411 SUB/OC N Green 5924205838410 SUB/OC N Green 5924295838451 SUB/OC N Green 5924305838450 SUB/OC N Green 5924315838449 SUB/OC N Green 5924235838476 SUB/OC N Green 5924245838475 SUB/OC N Green 5924255838474 SUB/OC N Green 5924055838469 SUB/OC N Green

| PY | Shale/siltstone |
| :---: | :---: |
| PY | Shale/siltstone |
| PY | Shale/siltstone |
| PY | Andesitic volcaniclastics |
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| PY | Andesitic volcaniclastics |
| PY | Andesitic volcaniclastics |
| PY | Andesitic volcaniclastics |
| PO, PY | Sandstone |
| PO, PY | Sandstone |
| PO, PY | Sandstone |
| PO, PY | Sandstone |
| PO, PY | Sandstone |
| PO, PY | Sandstone |
| PO, PY | Sandstone |
| PO, PY | Sandstone |
| PO | Andesitic volcaniclastics |
| PY | Andesitic volcaniclastics |
| PO, PY | Sandstone |
| PO, PY | Sandstone |
| PO, PY | Sandstone |
| PY | Andesitic volcaniclastics |
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| Andesitic volcaniclastics |  |
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Table No. 2
Sample Coordinates and Descriptions

| XRF No. | Sample No. | Fig. No. / Area | Easting | Northing Type |  | Descrir |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 549 | kangcr o(1 43a | Fig. 11 / Area C | 592406 | 5838468 SUB/OC | N | Green | PY | Andesitic volcaniclastics |
| 550 | kangcr o(l 43b | Fig. 11 / Area C | 592407 | 5838467 SUB/OC | N | Green | PY | Andesitic volcaniclastics |
| 551 | kangcr o(l 44 | Fig. 11 / Area C | 592370 | 5838485 SUB/OC | N | Green | PY | Andesitic volcaniclastics |
| 552 | kangcr o(1 44a | Fig. 11 / Area C | 592371 | 5838484 SUB/OC | N | Green | PY | Andesitic volcaniclastics |
| 553 | kangcr o(l 44b | Fig. 11 / Area C | 592372 | 5838483 SUB/OC | N | Green | PY | Andesitic volcaniclastics |
| 554 | kangcr o(l 45 | Fig. 11 / Area C | 592402 | 5838496 SUB/OC | N | Black | PY | Shale/siltstone |
| 555 | kangcr o(l 45a | Fig. 11 / Area C | 592403 | 5838495 SUB/OC | N | Black | PY | Shale/siltstone |
| 556 | kangcr o(l 45b | Fig. 11 / Area C | 592404 | 5838494 SUB/OC | N | Black | PY | Shale/siltstone |
| 557 | kangcr o(l 46 | Fig. 11 / Area C | 592443 | 5838504 SUB/OC | N | Black | PY | Shale/siltstone |
| 558 | kangcr o(1 46a | Fig. 11 / Area C | 592444 | 5838503 SUB/OC | N | Black | PY | Shale/siltstone |
| 559 | kangcr o(l 46b | Fig. 11 / Area C | 592445 | 5838502 SUB/OC | N | Black | PY | Shale/siltstone |
| 560 | kangcr o(l 47 | Fig. 11 / Area C | 592475 | 5838533 SUB/OC | N | Black | PY | Shale/siltstone |
| 561 | kangcr o(1 47a | Fig. 11 / Area C | 592476 | 5838532 SUB/OC | N | Black | PY | Shale/siltstone |
| 562 | kangcr o(l 47b | Fig. 11 / Area C | 592477 | 5838531 SUB/OC | N | Black | PY | Shale/siltstone |

Frank Ck-2016 Rock Sampling
Easting Northing Type Sample Descrir

| fcc 8405-01 | Fig. 13 / Area A |
| :---: | :---: |
| fcc $8405-01 \mathrm{a}$ | Fig. 13 / Area A |
| fcc $8405-01 \mathrm{~b}$ | Fig. 13 / Area A |
| fcc 8405-02 | Fig. 13 / Area A |
| fcc 8405-02a | Fig. 13 / Area A |
| fcc $8405-02 \mathrm{~b}$ | Fig. 13 / Area A |
| fcc 8405-03 | Fig. 13 / Area A |
| fcc 8405-03a | Fig. 13 / Area A |
| fcc $8405-03 \mathrm{~b}$ | Fig. 13 / Area A |
| fcc 8405-04 | Fig. 13 / Area A |
| fcc 8405-04a | Fig. 13 / Area A |
| fcc $8405-04 \mathrm{~b}$ | Fig. 13 / Area A |
| fcc 8405-05 | Fig. 13 / Area A |
| fcc 8405-05a | Fig. 13 / Area A |
| fcc $8405-05 \mathrm{~b}$ | Fig. 13 / Area A |
| fcc 8405-06 | Fig. 13 / Area A |
| fcc 8405-06a | Fig. 13 / Area A |
| fcc $8405-06 \mathrm{~b}$ | Fig. 13 / Area A |
| fcc 8405-07 | Fig. 13 / Area A |
| fcc 8405-07a | Fig. 13 / Area A |
| fcc $8405-07 \mathrm{~b}$ | Fig. 13 / Area A |
| fcc 8405-08 | Fig. 13 / Area A |
| fcc 8405-08a | Fig. 13 / Area A |
| fcc $8405-08 \mathrm{~b}$ | Fig. 13 / Area A |
| fcc 8405-09 | Fig. 13 / Area A |
| fcc 8405-09a | Fig. 13 / Area A |
| fcc $8405-09 \mathrm{~b}$ | Fig. 13 / Area A |


| 607494 | 5844713 | FL | N | Black | py | Siltstone |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 607495 | 5844712 | FL | N | Black | py | Siltstone |
| 607496 | 5844711 | FL | N | Black | py | Siltstone |
| 607517 | 5844704 | FL | N | Black | py | Siltstone |
| 607518 | 5844703 | FL | N | Black | py | Siltstone |
| 607519 | 5844702 | FL | N | Black | py | Siltstone |
| 607518 | 5844691 | FL | N | Black | py | Siltstone |
| 607519 | 5844690 | FL | N | Black | py | Siltstone |
| 607520 | 5844689 | FL | N | Black | py | Siltstone |
| 607508 | 5844678 | FL | N | Black | py | Siltstone |
| 607509 | 5844677 | FL | N | Black | py | Siltstone |
| 607510 | 5844676 | FL | N | Black | py | Siltstone |
| 607508 | 5844673 | FL | N | Black | py | Siltstone |
| 607509 | 5844672 | FL | N | Black | py | Siltstone |
| 607510 | 5844671 | FL | N | Black | py | Siltstone |
| 607498 | 5844690 | FL | N | Black | Minor py | Arg |
| 607499 | 5844689 | FL | N | Black | Minor py | Arg |
| 607500 | 5844688 | FL | N | Black | Minor py | Arg |
| 607484 | 5844694 | FL | N | Black | Minor py | Arg |
| 607485 | 5844693 | FL | N | Black | Minor py | Arg |
| 607486 | 5844692 | FL | N | Black | Minor py | Arg |
| 607472 | 5844688 | FL | N | Black | Minor py | Arg |
| 607473 | 5844687 | FL | N | Black | Minor py | Arg |
| 607474 | 5844686 | FL | N | Black | Minor py | Arg |
| 607476 | 5844709 | FL | N | Black | Minor py | Arg |
| 607477 | 5844708 | FL | N | Black | Minor py | Arg |
| 607478 | 5844707 | FL | N | Black | Minor py | Arg |

Table No. 2
Sample Coordinates and Descriptions

| XRF No. | Sample No. | Fig. No. / Area | Easting | Northing | Type | Sam | Descri |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 313 | fcc 8405-10 | Fig. 13 / Area A | 607451 | 5844683 | FL | N | Black | Minor py | Arg |
| 314 | fcc 8405-10a | Fig. 13 / Area A | 607452 | 5844682 | FL | N | Black | Minor py | Arg |
| 315 | fcc $8405-10 \mathrm{~b}$ | Fig. 13 / Area A | 607453 | 5844681 | FL | N | Black | Minor py | Arg |
| 316 | fcc 8405-11 | Fig. 13 / Area A | 607430 | 5844597 | FL | N | Black | Minor py | Arg |
| 317 | fcc $8405-11 \mathrm{a}$ | Fig. 13 / Area A | 607431 | 5844596 | FL | N | Black | Minor py | Arg |
| 318 | fcc $8405-11 \mathrm{~b}$ | Fig. 13 / Area A | 607432 | 5844595 | FL | N | Black | Minor py | Arg |
| 319 | fcc 8405-12 | Fig. 13 / Area A | 607436 | 5844582 | FL | N | Black | PY | Siltstone |
| 320 | fcc 8405-12a | Fig. 13 / Area A | 607437 | 5844581 | FL | N | Black | PY | Siltstone |
| 321 | fcc $8405-12 \mathrm{~b}$ | Fig. 13 / Area A | 607438 | 5844580 | FL | N | Black | PY | Siltstone |
| 322 | fcc 8405-13 | Fig. 13 / Area A | 607429 | 5844574 | FL | N | Black | PY | Siltstone |
| 323 | fcc 8405-13a | Fig. 13 / Area A | 607430 | 5844573 | FL | N | Black | PY | Siltstone |
| 324 | fcc $8405-13 \mathrm{~b}$ | Fig. 13 / Area A | 607431 | 5844572 | FL | N | Black | PY | Siltstone |
| 325 | fcc 8405-14 | Fig. 13 / Area A | 607420 | 5844568 | FL | N | Black | PY | Siltstone |
| 326 | fcc 8405-14a | Fig. 13 / Area A | 607421 | 5844567 | FL | N | Black | PY | Siltstone |
| 327 | fcc $8405-14 \mathrm{~b}$ | Fig. 13 / Area A | 607422 | 5844566 | FL | N | Black | PY | Siltstone |
| 328 | fcc 8405-15 | Fig. 13 / Area A | 607421 | 5844559 | FL | N | Black | PY | Siltstone |
| 329 | fcc 8405-15a | Fig. 13 / Area A | 607422 | 5844558 | FL | N | Black | PY | Siltstone |
| 330 | fcc 8405-15b | Fig. 13 / Area A | 607423 | 5844557 | FL | N | Black | PY | Siltstone |
| 331 | fcc 8405-16 | Fig. 13 / Area A | 607403 | 5844559 | FL | N | Black | PY | Siltstone |
| 332 | fcc 8405-16a | Fig. 13 / Area A | 607404 | 5844558 | FL | N | Black | PY | Siltstone |
| 333 | fcc $8405-16 \mathrm{~b}$ | Fig. 13 / Area A | 607405 | 5844557 | FL | N | Black | PY | Siltstone |
| 334 | fcc 8405-17 | Fig. 13 / Area A | 607388 | 5844556 | FL | N | Black | PY | Siltstone |
| 335 | fcc 8405-17a | Fig. 13 / Area A | 607389 | 5844555 | FL | N | Black | PY | Siltstone |
| 336 | fcc $8405-17 \mathrm{~b}$ | Fig. 13 / Area A | 607390 | 5844554 | FL | N | Black | PY | Siltstone |
| 337 | fcc 8405-18 | Fig. 13 / Area A | 607386 | 5844571 | FL | N | Black | PY | Siltstone |
| 338 | fcc 8405-18a | Fig. 13 / Area A | 607387 | 5844570 | FL | N | Black | PY | Siltstone |
| 339 | fcc $8405-18 \mathrm{~b}$ | Fig. 13 / Area A | 607388 | 5844569 | FL | N | Black | PY | Siltstone |
| 340 | fcc 8405-19 | Fig. 13 / Area A | 607352 | 5844663 | FL | N | Black | PY | Siltstone |
| 341 | fcc 8405-19a | Fig. 13 / Area A | 607353 | 5844662 | FL | N | Black | PY | Siltstone |
| 342 | fcc $8405-19 \mathrm{~b}$ | Fig. 13 / Area A | 607354 | 5844661 | FL | N | Black | PY | Siltstone |
| 343 | fcc 8405-20 | Fig. 13 / Area A | 607338 | 5844678 | FL | N | Black | PY | Siltstone |
| 344 | fcc 8405-20a | Fig. 13 / Area A | 607339 | 5844677 | FL | N | Black | PY | Siltstone |
| 345 | fcc $8405-20 \mathrm{~b}$ | Fig. 13 / Area A | 607340 | 5844676 | FL | N | Black | PY | Siltstone |
| 346 | fcc 8405-21 | Fig. 13 / Area A | 607315 | 5844682 | FL | N | Black | Minor PY | Arg |
| 347 | fcc $8405-21$ a | Fig. 13 / Area A | 607316 | 5844681 | FL | N | Black | Minor PY | Arg |
| 348 | fcc $8405-21 \mathrm{~b}$ | Fig. 13 / Area A | 607317 | 5844680 | FL | N | Black | Minor PY | Arg |
| 349 | fcc 8405-22 | Fig. 13 / Area A | 607287 | 5844706 | FL | N | Black | Minor PY | Arg |
| 350 | fcc 8405-22a | Fig. 13 / Area A | 607288 | 5844705 | FL | N | Black | Minor PY | Arg |
| 351 | fcc $8405-22 \mathrm{~b}$ | Fig. 13 / Area A | 607289 | 5844704 | FL | N | Black | Minor PY | Arg |
| 352 | fcc 8405-23 | Fig. 13 / Area A | 607265 | 5844731 | FL | N | Black | Minor PY | Arg |
| 353 | fcc 8405-23a | Fig. 13 / Area A | 607266 | 5844730 | FL | N | Black | Minor PY | Arg |
| 354 | fcc 8405-23b | Fig. 13 / Area A | 607267 | 5844729 | FL | N | Black | Minor PY | Arg |
| 355 | fcc 8405-24 | Fig. 13 / Area A | 607327 | 5844734 | FL | N | Black | Minor PY | Arg |
| 356 | fcc 8405-24a | Fig. 13 / Area A | 607328 | 5844733 | FL | N | Black | Minor PY | Arg |
| 357 | fcc $8405-24 \mathrm{~b}$ | Fig. 13 / Area A | 607329 | 5844732 | FL | N | Black | Minor PY | Arg |
| 358 | fcc 8405-25 | Fig. 13 / Area A | 607359 | 5844715 | FL | N | White |  | QV |

Table No. 2
Sample Coordinates and Descriptions

| XRF No. | Sample No. | Fig. No. / Area | Easting | Northing | Type | Sam | Descrir |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 359 | fcc 8405-25a | Fig. 13 / Area A | 607360 | 5844714 | FL | N | White |  | QV |
| 360 | fcc 8405-25b | Fig. 13 / Area A | 607361 | 5844713 | FL | N | White |  | QV |
| 361 | fcc 8405-26 | Fig. 13 / Area A | 607238 | 5844432 | FL | N | White |  | QV |
| 362 | fcc $8405-26 \mathrm{a}$ | Fig. 13 / Area A | 607239 | 5844431 | FL | N | White |  | QV |
| 363 | fcc $8405-26 \mathrm{~b}$ | Fig. 13 / Area A | 607240 | 5844430 | FL | N | White |  | QV |
| 364 | fcc 8405-27 | Fig. 13 / Area A | 607254 | 5844418 | FL | N | White |  | QV |
| 365 | fcc $8405-27 \mathrm{a}$ | Fig. 13 / Area A | 607255 | 5844417 | FL | N | White |  | QV |
| 366 | fcc $8405-27 \mathrm{~b}$ | Fig. 13 / Area A | 607256 | 5844416 | FL | N | White |  | QV |
| 367 | fcc 8405-28 | Fig. 13 / Area A | 607269 | 5844405 | FL | N | White |  | QV |
| 368 | fcc $8405-28 \mathrm{a}$ | Fig. 13 / Area A | 607270 | 5844404 | FL | N | White |  | QV |
| 369 | fcc $8405-28 \mathrm{~b}$ | Fig. 13 / Area A | 607271 | 5844403 | FL | N | White |  | QV |
| 370 | fcc 8405-29 | Fig. 13 / Area A | 607292 | 5844409 | FL | N | Black | Minor py | Arg |
| 371 | fcc 8405-29a | Fig. 13 / Area A | 607293 | 5844408 | FL | N | Black | Minor py | Arg |
| 372 | fcc 8405-29b | Fig. 13 / Area A | 607294 | 5844407 | FL | N | Black | Minor py | Arg |
| 373 | fcc 8405-30 | Fig. 13 / Area A | 607300 | 5844385 | FL | N | Black | Minor py | Arg |
| 374 | fcc $8405-30 \mathrm{a}$ | Fig. 13 / Area A | 607301 | 5844384 | FL | N | Black | Minor py | Arg |
| 375 | fcc $8405-30 \mathrm{~b}$ | Fig. 13 / Area A | 607302 | 5844383 | FL | N | Black | Minor py | Arg |
| 376 | fcc 8405-31 | Fig. 13 / Area A | 607319 | 5844357 | FL | N | Black | Minor py | Arg |
| 377 | fcc $8405-31 \mathrm{a}$ | Fig. 13 / Area A | 607320 | 5844356 | FL | N | Black | Minor py | Arg |
| 378 | fcc $8405-31 \mathrm{~b}$ | Fig. 13 / Area A | 607321 | 5844355 | FL | N | Black | Minor py | Arg |
| 379 | fcc 8405-32 | Fig. 13 / Area A | 607336 | 5844338 | FL | N | White |  | QV |
| 380 | fcc 8405-32a | Fig. 13 / Area A | 607337 | 5844337 | FL | N | White |  | QV |
| 381 | fcc 8405-32b | Fig. 13 / Area A | 607338 | 5844336 | FL | N | White |  | QV |
| 382 | fcc $8405-32 \mathrm{~b}$ | Fig. 13 / Area A | 607339 | 5844335 | FL | N | White |  | QV |
| 383 | fcc 8405-33 | Fig. 13 / Area A | 607357 | 5844320 | FL | N | Grey | Minor py | Arg |
| 384 | fcc $8405-33 \mathrm{a}$ | Fig. 13 / Area A | 607358 | 5844319 | FL | N | Grey | Minor py | Arg |
| 385 | fcc 8405-33b | Fig. 13 / Area A | 607359 | 5844318 | FL | N | Grey | Minor py | Arg |
| 386 | fcc 8405-34 | Fig. 13 / Area A | 607314 | 5844292 | FL | N | Grey | Minor py | Arg |
| 387 | fcc $8405-34 \mathrm{a}$ | Fig. 13 / Area A | 607315 | 5844291 | FL | N | Grey | Minor py | Arg |
| 388 | fcc $8405-34 \mathrm{~b}$ | Fig. 13 / Area A | 607316 | 5844290 | FL | N | Grey | Minor py | Arg |
| 389 | fcc 8405-35 | Fig. 13 / Area A | 607251 | 5844297 | FL | N | Grey | Minor py | Arg |
| 390 | fcc 8405-35a | Fig. 13 / Area A | 607252 | 5844296 | FL | N | Grey | Minor py | Arg |
| 391 | fcc 8405-35b | Fig. 13 / Area A | 607253 | 5844295 | FL | N | Grey | Minor py | Arg |
| 392 | fcc 8405-36 | Fig. 13 / Area A | 607198 | 5844298 | FL | N | Black | PY | Siltstone |
| 393 | fcc $8405-36 \mathrm{a}$ | Fig. 13 / Area A | 607199 | 5844297 | FL | N | Black | PY | Siltstone |
| 394 | fcc $8405-36 \mathrm{~b}$ | Fig. 13 / Area A | 607200 | 5844296 | FL | N | Black | PY | Siltstone |
| 395 | fcc 8405-37 | Fig. 13 / Area A | 607159 | 5844303 | FL | N | Black | PY | Siltstone |
| 396 | fcc $8405-37 \mathrm{a}$ | Fig. 13 / Area A | 607160 | 5844302 | FL | N | Black | PY | Siltstone |
| 397 | fcc $8405-37 \mathrm{~b}$ | Fig. 13 / Area A | 607161 | 5844301 | FL | N | Black | PY | Siltstone |
| 398 | fcc 8405-38 | Fig. 13 / Area A | 607142 | 5844319 | FL | N | Black | Minor py | Arg |
| 399 | fcc $8405-38 \mathrm{a}$ | Fig. 13 / Area A | 607143 | 5844318 | FL | N | Black | Minor py | Arg |
| 400 | fcc $8405-38 \mathrm{~b}$ | Fig. 13 / Area A | 607144 | 5844317 | FL | N | Black | Minor py | Arg |
| 401 | fcc 8405-39 | Fig. 13 / Area A | 607147 | 5844367 | FL | N | Black | Minor py | Arg |
| 402 | fcc $8405-39 \mathrm{a}$ | Fig. 13 / Area A | 607148 | 5844366 | FL | N | Black | Minor py | Arg |
| 403 | fcc $8405-39 \mathrm{~b}$ | Fig. 13 / Area A | 607149 | 5844365 | FL | N | Black | Minor py | Arg |
| 404 | fcc 8405-40 | Fig. 13 / Area A | 607124 | 5844462 | FL | N | Black | Minor py | Arg |

Table No. 2
Sample Coordinates and Descriptions

| XRF No. | Sample No. | Fig. No. / Area | Easting | Northing | Type | Samp | Descrir |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 405 | fcc $8405-40 \mathrm{a}$ | Fig. 13 / Area A | 607125 | 5844461 | FL | N | Black | Minor py | Arg |
| 406 | fcc $8405-40 \mathrm{~b}$ | Fig. 13 / Area A | 607126 | 5844460 | FL | N | Black | Minor py | Arg |
| 407 | fcc 8405-41 | Fig. 13 / Area A | 607104 | 5844499 | FL | N | Black | Minor py | Arg |
| 408 | fcc $8405-41 \mathrm{a}$ | Fig. 13 / Area A | 607105 | 5844498 | FL | N | Black | Minor py | Arg |
| 409 | fcc $8405-41 \mathrm{~b}$ | Fig. 13 / Area A | 607106 | 5844497 | FL | N | Black | Minor py | Arg |
| 410 | fcc $8405-42$ | Fig. 13 / Area A | 607115 | 5844519 | FL | N | Black | Minor py | Arg |
| 411 | fcc $8405-42 \mathrm{a}$ | Fig. 13 / Area A | 607116 | 5844518 | FL | N | Black | Minor py | Arg |
| 412 | fcc $8405-42 \mathrm{~b}$ | Fig. 13 / Area A | 607117 | 5844517 | FL | N | Black | Minor py | Arg |
| 413 | fcc $8405-43$ | Fig. 13 / Area A | 607122 | 5844543 | FL | N | Black | Minor py | Arg |
| 414 | fcc 8405-43a | Fig. 13 / Area A | 607123 | 5844542 | FL | N | Black | Minor py | Arg |
| 415 | fcc $8405-43 \mathrm{~b}$ | Fig. 13 / Area A | 607124 | 5844541 | FL | N | Black | Minor py | Arg |
| 416 | fcc 8405-44 | Fig. 13 / Area A | 607108 | 5844600 | FL | N | Black | Minor py | Arg |
| 417 | fcc $8405-44 \mathrm{a}$ | Fig. 13 / Area A | 607109 | 5844599 | FL | N | Black | Minor py | Arg |
| 418 | fcc $8405-44 \mathrm{~b}$ | Fig. 13 / Area A | 607110 | 5844598 | FL | N | Black | Minor py | Arg |
| 419 | fcc $8405-45$ fines | Fig. 13 / Area A | 607098 | 5844662 | Silt | N |  |  | Silt sample |
| 420 | fcc $8405-45$ fines a | Fig. 13 / Area A | 607099 | 5844661 | Silt | N |  |  | Silt sample |
| 421 | fcc $8405-45$ fines b | Fig. 13 / Area A | 607100 | 5844660 | Silt | N |  |  | Silt sample |

APPENDIX H

## Kangaroo Project

Maps and XRF Geochemical Results



Table No. 3
Kangaroo Area A - XRF Sampling Results

| XRF No. | Sample No. | Fig. No./Area | Type | Units | Mo | Zr | Sr | U | Rb | Th | Pb | Se | As | Hg | Au | Zn | W | Cu | Ni | Co | Fe | Mn | Sb | Sn | Cd | Ag | Nb | Y | Bi | Cr | V | Ti |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 422 | kang cr oflook 1 | Fig. 9 / Kang A | rock | m | 434 | 465 | <LOD | < LOD | <LOD | D 909 | 9 <LOD | < LOD | < LOD | <LOD | < LOD | < LOD | < LOD | <LOD | < LOD | <LOD | < LOD | <LOD | LOD |  |  | LOD | LOD |  | LO | < LOD | LOD | OD |
| 423 | kang cr ollook 1a | Fig. 9 / Kang A | rock | ppm | <LOD | 52 | 237 | LOD |  | $8<$ LOD | < LOD | OD | LOD | OD | LOD | 95 | LOD | 153 | 148 | LOD | 67994 | 58 | < LOD | LOD | LOD | < LOD | LOD |  | < LOD | < LOD | LOD | OD |
| 424 | kang cr ollook 1b | Fig. 9 / Kang A | rock | ppm | <LOD | 25 | 278 | LOD |  | $2<$ LOD | < LO | OD | LOD | LOD | < LOD | 107 | < LOD | 87 | < LO | <LOD | 16938 | 1259 | < LOD | LOD | LOD | < LOD | LOD |  | <LOD | < LOD | LO | OD |
| 425 | kang crollook 2 | Fig. 9 / Kang A | ro | ppm | < LOD | 49 | 20 | LOD |  | 4 | $4<$ | D | D | < LOD | OD | 94 | < LOD | 95 |  | D | 67267 | 139 | < LOD |  | < LOD | LOD | 4 |  | < LOD | < LOD | LOD | OD |
| 426 | kang cr ollook 2a | Fig. 9 / Kang A | rock | ppm | <LOD | 49 | 177 | < LOD |  | LOD | < LO | LOD | OD | < LOD | LOD | 79 | <LOD | 46 | < LOD | < LOD | 75154 | LOD | < LO | LO | LOD | < LOD | LOD |  | LOD | LO | LOD | OD |
| 427 | kang cr ollook 2 b | Fig. 9 / Kang A | rock | ppm | < LOD | 53 | 225 | 7.43 |  | 4 < LOD | D | < LOD | LOD | < LOD | < LOD | 91 | <LOD | 303 |  | LOD | 74684 | 926 | < LOD | < LOD | < LOD | < LOD | LOD |  | <LOD | < LOD | < LOD | OD |
| 428 | kang cr o(look 3 | Fig. 9 / Kang A | rock | ppm | <LOD | 54 | 237 | < LOD |  | 4 < LOD | < | D | < LOD | < LOD | < LOD | 87 | < LOD | 71 | < LO | LOD | 61796 | < LOD | < LOD | < LOD | < LOD | LOD | 4 |  | < LOD | < LOD | LOD | OD |
| 429 | kang cr ollook 3a | Fig. 9/ Kang A | rock | ppm | < LOD | 53 | 223 | LOD |  | $6<$ LOD | D | < LOD | OD | < LOD | LOD | 97 | <LOD | 235 | < LO | LOD | 78983 | 526 | LO | < LOD | LO | LOD | LOD |  | <LOD | < LO | LO | OD |
| 430 | kang cr ollook 3b | Fig. 9 / Kang A | rock | ppm | <LOD | 52 | 27 | LOD |  | 4 | 4 < LOD | OD | OD | LOD | < LOD | 88 | < LOD | 119 |  | LOD | 60802 | 30 | LOD | LO | LOD | LOD | LOD |  | < LOD | LOD | LO | LOD |
| 431 | kang crollook 4 | Fig. 9 / Kang A | rock | ppm | <LOD | 48 | 22 | LOD |  | $5<$ LOD | <LOD | OD | OD | < LOD | < LOD | 100 | < LOD | 78 |  | < LOD | 57938 | 145 | LO | LOD | LO | LO | LOD |  | <LO | < LO | LO | LOD |
| 432 | kang cr oflook 4a | Fig. 9 / Kang A | rock | ppm | < LOD | 38 | 181 | LOD |  | 4 | 4 < LOD | <LOD |  | - LOD | < LOD | 67 | < LOD | 98 | < LOD | <LOD | 52191 | 18 | LO | LOD | LO | LOD | LOD |  | LOD | LO | LOD | LOD |
| 433 | kang cr oflook 4b | Fig. 9 / Kang A | rock | ppm | <LOD | 47 | 18 | LOD |  | 7 | $7<$ LOD | LOD | OD | LOD | LOD | 92 | < LOD | 103 |  | LOD | 63772 | 13 | < LOD | LOD | LOD | LO | LOD |  | < LOD | < LOD | LOD | LOD |
| 434 | kang crollook 5 | Fig. 9 / Kang A | rock | ppm | <LOD | 35 | 433 | 8.39 |  | $7<$ LOD | < LOD | < LOD |  | 7 <LOD | < LOD | 98 | < LOD | 116 | < LOD | < LOD | 66213 | LOD | LO | LOD | LO | LO | LOD |  | <LO | < LO | < LO | LOD |
| 435 | kang cr oflook 5a | Fig. 9 / Kang A | ro | ppm | < LOD | 38 | 419 | 9.08 |  | 9 | $9<$ LOD | < LOD |  | D | < LOD | 140 | < LOD | 104 |  | <LOD | 72693 | 3104 | LOD | LOD | LO | LOD | LOD |  | < LO | LO | LO | LOD |
| 436 | kang cr ollook 5b | Fig. 9 / Kang A | ro | ppm | < LOD | 34 | 398 | < LOD |  | $5<$ LOD | < LOD | LOD |  | 3 < LOD | LOD |  | < LOD | 71 | < LOD | < LOD | 72292 | LOD | < LOD | LOD | LO | LOD | OD |  | < LOD | LO | LOD | LOD |
| 437 | kang crollook 6 | Fig. 9 / Kang A | ro | pp | < LOD | 47 | 223 | < LOD |  | 18 < LOD | < LOD | < LOD | LOD | <LOD | 12.61 | 85 | <LOD | 101 |  | LOD | 66511 | 1608 | < LO | LOD | LO | LOD | LOD |  | <LOD | LO | < LOD | 2746 |
| 438 | kang cr ollook 6 a | Fig. 9 / Kang A | rock | ppm | < LOD | 54 | 225 | LOD |  | 13 < LOD | < LOD | LOD | LOD | < LOD | < LOD |  | < LOD | 80 | LOD | LOD | 80264 | LOD | < LOD | LOD | LO | LOD | 4 |  | < LO | < LOD | LOD | LOD |
| 439 | kang cr ollook 6 b | Fig. 9 / Kang A | rock | ppm | <LOD | 46 | 258 | <LOD |  | 11 | $1<$ LOD | < LOD | LOD | LO | LOD | 76 | < LOD | 97 | LOD | < LOD | 6041 | LOD | < LOD | < LOD | < LOD | < LOD | LOD |  | < LOD | < LOD | LOD | LOD |
| 440 | kang cr oflook 7 | Fig. 9 / Kang A | rock | ppm | < LOD | 41 | 265 | LOD |  | 10 < LOD | < LOD | < LOD | LOD | < LOD | < LOD | 86 | < LOD | 95 | LOD | <LOD | 5956 | <LOD | < LOD | LO | < LO | LOD | 3 |  | < LOD | < LOD | LOD | LOD |
| 441 | kang cr oflook 7 a | Fig. 9 / Kang A | rock | ppm | < LOD | 43 | 315 | LOD |  | 4 <LOD | < LO | OD | LOD | LOD | < LOD |  | < LOD | 98 | < LOD | < LOD | 55 | LOD | LOD | LO | LO | LOD | LOD |  | < LOD | LO | LOD | LOD |
| 442 | kang cr ollook 7b | Fig. 9 / Kang A | rock | ppm | <LOD | 49 | 285 | 8.07 |  | 11 | 6 | < LOD | LOD | OD | < LOD | 96 | LOD | 63 |  | < LOD | 66873 | 1524 | < LOD | < LOD | <LO | < LOD | LOD |  | LOD | < LOD | LOD | OD |
| 443 | kang cr oflook 8 | Fig. 9 / Kang A | rock | ppm | <LOD | 17 |  | LO | D |  | $4<$ LOD | < LOD | LOD | OD | 11.53 | 77 | < LOD | 81 |  | LOD | 71707 | 14 | LOD | < LOD | < LOD | LOD |  |  | <LOD | LOD | LOD | OD |
| 444 | kang cr o (look 8 a | Fig. 9 / Kang A | ro | ppm | <LOD | 22 |  | < LOD | OD | - LOD | < | LOD | < LOD | < LOD | LOD | 130 | <LOD | 99 |  | <LOD | 73562 | LOD | LO | LO | LO | LOD |  |  | LOD | LOD | LOD | LOD |
| 445 | kang cr ollook 8b | Fig. 9 / Kang A | rock | ppm | <LOD | 13 | 178 | OD | OD | - LOD | < LOD | LOD | OD | < LOD | <LOD | 69 | LOD | 60 | 144 | 342 | 23265 | 140 | LOD | < LOD | < LOD | LOD | LOD | OD | < LOD | LOD | LOD | OD |
| 446 | kang cro(look 9 | Fig. 9 / Kang A | rock | ppm | <LOD | 51 | 210 | LOD |  | 24 | 4 < LOD | OD | LOD | < LOD | LOD |  | < LOD | 76 | LOD | < LOD | 56160 | 13 | LOD | LO | < LOD | LOD | 4 |  | <LOD | < LOD | LOD | OD |
| 447 | kang cr oflook 9a | Fig. 9 / Kang A | rock | ppm | <LOD | 49 | 205 | < LOD |  | < LOD | < LOD | LOD |  | 3 | OD |  | < LOD | 351 | LOD | < LOD | 67777 | 7433 | < LO | LOD | < LO | LOD | 5 |  | LOD | LO | LOD | LOD |
| 448 | kang cr ollook 9b | Fig. 9 / Kang A | ro | ppm | < LOD | 51 | 220 | <LOD |  | $3<$ LOD | < LO | LOD | < LOD | < LOD | < LOD |  | < LOD | 181 | < LOD | <LOD | 73717 | <LOD | < LOD | LOD | LOD | LOD | LOD |  | <LOD | LO | LO | LOD |
| 449 | kang cr ollook 10 | Fig. 9 / Kang A | rock | ppm | <LOD | 47 | 231 | < LOD | < LOD |  | 6 < LOD | < LOD |  | OD | LOD | 94 | LOD | 272 |  | < LOD | 62828 | 7635 | < LOD | < LOD | LOD | LOD | 3 |  | < LOD | < LOD | LOD | LOD |
| 450 | kang cr ollook 10a | Fig. 9 / Kang A | rock | ppm | <LOD | 49 | 22 | D |  | < LOD | D | < LOD | OD | < LOD | LOD |  | LOD | 72 |  | <LOD | 56713 | < LOD | LO | < LOD | LOD | LOD | LOD |  | < LOD | < LOD | LOD | OD |
| 451 | kang cr oflook 10b | Fig. 9 / Kang A | rock | ppm | < LOD | 48 | 209 | <LOD |  | $3<$ LOD | < LOD | < LOD | < LOD | < LOD | < LOD |  | < LOD | 83 | < LOD | < LOD | 60322 | <LOD | < LOD | < LOD | < LOD | < LOD | 3 |  | < LOD | < LO | < LOD | LOD |
| 452 | kang cr ov(l 11 | Fig. 9 / Kang A | rock | ppm | 515 | 445 | 162 | 454.1 | LOD | D 1170 | < LOD | LOD | < LOD | < LOD | < LOD | < LOD | < LOD | <LOD | < LOD | < LOD | LOD | <LOD | < LOD | LOD | < LOD | LOD | LOD |  | < LO | LOD | LOD | LOD |
| 453 | kang cr ov(l 11a | Fig. 9 / Kang A | rock | ppm | 7 | 52 |  | OD |  | 2815 | 5 <LOD | < LOD |  | 2 < LOD | < LOD |  | < LOD | 49 |  | < LOD | 86813 | 2588 | 75 |  | < LOD | LOD | 7 |  | <LOD | < LOD | < LOD | OD |
| 454 | kang cr ov(111b | Fig. 9 / Kang A | rock | ppm | 10 | 40 |  | < LOD |  | 2121 | 1 < LOD | < LOD | < LOD | < LOD | < LOD |  | < LOD | 64 | < LOD | < LOD | 69511 | < LOD | 47 |  | < LOD | < LOD | 9 |  | < LO | < LOD | LO | LOD |
| 455 | kang cr ov(l1 12 | Fig. 9 / Kang A | rock | ppm | 7 | 52 | 468 | < LOD |  | 19 | $9<$ LOD | < LOD | LOD | < LOD | < LOD |  | < LOD | 151 | <LOD | < LOD | 60461 | <LOD | 64 |  | <LOD | < LOD | 10 |  | <LO | LO | LO | LOD |
| 456 | kang cr ov(1 12a | Fig. 9 / Kang A | rock | ppm | < LOD | 74 | 1019 | 19.39 |  | 6 <LOD | < LOD | LOD | < LOD | < LOD | < LOD |  | < LOD | 79 | < LOD | <LOD | 60588 | < LOD | < LOD | < LOD | < LO | < LOD | < LOD |  | < LO | < LOD | < LOD | LOD |
| 457 | kang cr ov(l 12 b | Fig. 9 / Kang A | rock | ppm | <LOD | 46 |  | < LOD |  | $13<$ LOD | < LOD | <LOD | < LOD | <LOD | < LOD |  | < LOD | 60 | < LOD | <LOD | 48496 | 1373 | < LOD | LOD | < LOD | < LOD | < LOD |  | <LOD | LOD | LOD | LOD |
| 458 | kang cr ov(113 | Fig. 9 / Kang A | rock | ppm | < LOD | 9 | 1196 | 15.12 | < LOD | - LOD | < LOD | < LOD | < LOD | < LOD | < LOD | 49 | < LOD | 28 | < LOD | < LOD | 40714 | < LOD | < LOD | < LOD | < LOD | < LOD | < LOD |  | < LOD | < LOD | < LOD | LOD |
| 459 | kang cr ov(1 13a | Fig. 9/ Kang A | rock | ppm | <LOD | 20 | 1098 | 11.45 | < LOD | - LOD | < LOD | < LOD | < LOD | < LOD | < LOD |  | < LOD | < LOD | < LOD | 382 | 44639 | < LOD | < LO | < LO | < LO | LO | LOD |  | < LOD | < LOD | LOD | LOD |
| 460 | kang cr ov(1 13b | Fig. 9 / Kang A | rock | ppm | < LOD | 12 | 971 | 9.82 | < LOD | - LOD | < LOD | < LOD | < LOD | < LOD | < LOD |  | < LOD | <LOD | < LOD | < LOD | 50083 | 3974 | < LO | LOD | LO | LOD | LOD | OD | < LO | LO | LO | OD |

In all cases <LOD means below level of detection


Table No. 4


Table No. 4
Kangaroo Area B - XRF Sampling Results

| RF No. | Sample No. | g. No./Area | Type | Units | Mo | Zr | Sr | U | Rb | Th | Pb | Se | As | Hg | Au | Zn | W | Cu | Ni | Co | Fe | Mn | Sb | Sn | Cd Ag | Nb | Y | Bi | Cr | V |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 509 | kangcr o(l 30 | Fig. 10 / Area B | rock | ppm | <LOD | 49 | 336 | OD |  | LOD | < LOD | < LOD |  | < LOD | <LOD | 62 | <LOD | 331 | < LOD | < LOD | 5979 | < LOD : |  | < LOD | LOD < LOD | 5 |  | LO | < LOD | LOD | LOD |
| 510 | kanger oll 30a | Fig. 10 / Area B | rock | ppm | <LOD | 46 | 334 | LOD |  | <LOD | < LOD | < LOD | < LOD | LO | OD | 69 | < LOD | 127 | < LOD | LOD | 58 | LOD | < LOD | < LOD | LOD < LOD | LOD |  | < LO | < LOD | LOD | LOD |
| 511 | kangcr ofl 30b | Fig. 10 / Area B | rock | ppm | <LOD | 41 | 335 | OD | 6 |  | < LOD | < LOD | < LOD | < LOD | < LOD | 71 | <LOD | 40 |  | < LOD | 54111 | 14 | < LOD | < LOD | LOD < LOD | LOD |  | < LO | < | LO | LOD |
| 512 | kangcr o(1 31 | Fig. 10 / Area B | rock | ppm | <LOD | 38 |  | OD |  | < LOD | < LOD | OD | 18 | 13.13 | OD | 52 | < LOD | 52 | OD | <LOD | 35112 |  | < LOD | < LOD | < LOD < LOD | LOD |  | <LOD | LOD | LOD | LOD |
| 513 | kanger ol 131a | Fig. 10 / Area B | rock | ppm | <LOD | 33 | 145 | LOD | 36 |  | LO | LOD |  | <LOD | OD | 57 | LOD | 25 | < LOD | 220 | 35642 | 10 | LO | LOD | LOD < LO | LOD |  | < LOD |  |  | LOD |
| 514 | kanger of( 31 b | Fig. 10 / Area B | rock | ppm | <LOD | 36 | 223 | LOD |  | < LOD | LOD | < LOD | 33 | LOD | < LOD | 55 | <LOD | 199 | < LOD | <LOD | 4496 | -0 | < LOD | < LOD | < LOD < LOD | LOD |  | < |  |  | LOD |
| 515 | kangcr o(1 32 | Fig. 10 / Area B | rock | ppm | <LOD | 45 |  | LOD |  | < LOD | < LOD | <LOD | < LOD | < LOD | < LOD | 59 | OD | 125 | < LOD | LOD | 39077 | 1878 | < LOD | < LOD | < LO | LOD |  | <LOD | LOD | LO | LOD |
| 516 | kangcr ol 132 a | Fig. 10 / Area B | rock | ppm | <LOD | 38 | 182 | LOD | OD | OD | < LOD | OD | LOD | LOD | OD | 78 | OD | 59 | <LOD | LO | 67693 | LOD | LOD | LOD | LOD | 3 |  | <LOD | LOD | LOD | LOD |
| 517 | kangcr ol 132 b | Fig. 10 / Area B | rock | ppm | <LOD | 51 | 182 | LOD | 3 |  | LOD | LOD | LOD | LOD | OD | 89 | <LOD | 63 | < LOD | LOD | 81744 | 163 | LOD | LOD | LOD < LOD | 5 |  | <LO | LOD | LOD | LOD |
| 518 | kangcr o(1 33 | Fig. 10 / Area B | rock | ppm | <LOD | 42 | 251 | 9.64 |  | OD | < LOD | < LOD | < LOD | < LOD | < LOD | 70 | OD | < LOD | < LOD | LOD | 56 | LOD | < LOD | < LOD | LOD < LOD | LOD |  | < LOD | LOD | < LOD | LOD |
| 519 | kangcr ofl 33a | Fig. 10 / Area B | rock | ppm | <LOD | 55 | 294 | LOD | 4 |  | < LOD | < LOD | LOD | < LOD | < LOD | 91 | LOD | 40 | LO | LO | 72434 | 165 | <LOD | < LOD | LOD < LOD | 5 |  | <LO | LO | LO | LOD |
| 520 | kangcr ol 33 b | Fig. 10 / Area B | rock | ppm | <LOD | 44 | 256 | LOD | 4 |  | LOD | < LOD | LOD | LOD | OD | 110 | < LOD | 171 |  | LOD | 85783 | 261 | LOD | LO | LOD < LO | OD |  | <LOD | <LOD | <LOD | LOD |
| 521 | kangcr o(1 34 | Fig. 10 / Area B | rock | ppm | <LOD | 44 | 115 | D | 23 |  | < LOD | D | 10 | 10.88 | OD | 92 | LOD | 96 |  | <LOD | 68516 | 275 | <LOD | LO | LOD < LOD | LOD |  | < LO | LO | < LO | LOD |
| 522 | kangcr ol 134 a | Fig. 10 / Area B | rock | ppm | < | 46 | 109 | < LOD |  | < LOD | < LOD | D |  | < LOD | LOD | 89 | < LOD | 63 | < LOD | LO | 76038 | 3128 | LOD | LOD | LOD < LOD | 4 |  | <LOD | LOD | < LOD | LOD |
| 523 | kangcr of 34 b | Fig. 10 / Area B | rock | ppm | <LOD | 42 | 17 | LOD | 18 |  | < LOD | < LOD | <LOD | LOD | OD | 68 | OD | 10 | < LOD | LOD | 34934 | 20 | < LOD | < LOD | LOD < LOD | LOD |  | < LO | < LOD | < LOD | LOD |
| 524 | kanger | Fig. 10 / Area B | rock | ppm | <LOD | 33 |  | OD |  | < LOD | <LOD | < LOD |  | OD | OD | 58 | OD | 60 | < LOD | <LOD | 53311 | 1524 | < LO | LO | LOD < LOD | LOD |  | < LOD | < LOD | LO | LOD |
| 525 | kangcr oll 35 a | Fig. 10 / Area B | rock | ppm | <LOD | 31 | 149 | LOD |  | < LOD | < LOD | < LOD |  | < LOD | LOD | 45 | < LOD | < LOD | < LOD | < LOD | 44535 | LOD | < LOD | < LO | < LOD < LOD | 4 |  | LO | < LOD | < LO | LOD |
| 526 | kangcr oll 35b | Fig. 10 / Area B | rock | ppm | <LOD | 30 | 132 | LOD |  | <LOD | < LOD | < LOD |  | < LOD | OD | 53 | <LOD | 52 | < LOD | 138 | 30870 |  | < LOD | < LO | < LOD < LOD | <LOD |  | < | LOD | LOD | LO |
| 527 | kangcr o(136 | Fig. 10 / Area B | rock | ppm | <LOD | 41 | 333 | 11.35 |  | <LOD | < LOD | LOD | <LOD | OD | OD | 88 | D | 99 |  | <LOD | 63780 | 1479 | LOD | < LOD | LOD < LOD | LOD |  | < LO | LO | < LOD | OD |
| 528 | kangcr ol 136 a | Fig. 10 / Area B | rock | ppm | <LOD | 77 | 527 | 14.66 | 3 |  | <LOD | < LOD | LO | LOD | LOD | 59 | <LOD | 38 | < LOD | <LOD | 25154 |  | < LOD | < LOD | < LOD < LOD |  |  | < LO | < LO | LO | LOD |
| 529 | kangcr ol 136 b | Fig. 10 / Area B | rock | ppm | <LOD | 41 | 389 | 7.67 | 3 | 20 | < LOD | < LOD | < LOD | < LOD | LOD | 66 | < LOD |  | <LOD | < LOD | 60092 | LOD | LO | LO | LOD < LOD | LOD | 2.32 | LO | < LOD | < LOD | LO |

In all cases <LOD means below level of detection


Table No. 5
Kangaroo Area C-XRF Sampling Results

| XRF No | Sample No. | /Area | Type | Units | Mo | Zr | Sr | U | Rb | Th | Pb | Se | As | Hg | Au | Zn | W | Cu | Ni | Co | Fe | Mn | Sb | Sn | Cd | Ag | Nb |  | Bi | Cr | V |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 530 | cr ol\| 37 | Fig. 11 / Area C | ck | ppm | <LOD | 34 | 484 | . 5 |  | 5 <LOD | LOD | < LOD | LOD | < LOD | LOD | 53 | LOD | 36 | LOD | < LOD | 2319 |  | < LOD | < LOD | < LOD | OD | LOD | 1.59 | LOD | LOD | LOD | LOD |
| 531 | kangcr ol 137 a | Fig. 11 / Area C | rock | ppm | <LOD | 65 | 419 | 10.35 |  | 6 < LOD | LOD | < LOD | LOD | < LOD | LOD | 70 | <LOD | < LOD | <LO | <LOD | 24704 | 850 |  | LO | LOD | < LOD | 3.73 |  | , |  |  | LOD |
| 532 | kanger ol 137 b | Fig. 11 / Area C | rock | ppm | <LOD | 80 | 5 | < LOD |  | 4 | < LOD | < LOD | D | < LOD | OD | 74 | LOD | 275 | LO | LOD | 595 |  |  |  |  | LOD | 5.88 |  |  |  |  | LOD |
| 533 | kangcr o(1 38 | Fig. 11 / Area C | rock | ppm | <LOD | 28 | 406 | OD |  | 6 <LOD |  |  | OD | - LOD | OD | 47 | OD | 78 | < LOD | OD | 3502 | LOD |  |  |  |  |  |  |  |  |  | OD |
| 534 | kanger ofl 38 a | Fig. 11 / Area C | rock | ppm | <LOD | 40 | 326 | < LOD |  | 314 | < LOD | < LOD | OD | < LOD | OD | 68 | LOD | 51 | < LOD | LOD | 4230 | LOD |  | LOD | LO | LOD | 3.05 |  |  |  |  | LOD |
| 535 | kangcr ofl 38 b | Fig. 11 / Area C | rock | ppm | <LOD | 53 | 431 | 7.71 |  |  | < LOD | < LOD | < LOD | < LOD | D | 54 | D | 83 | < LOD | < LOD | 200 | 1046 | < LO | < LO | < LOD | < LOD | 3.88 |  |  | LOD | LOD | D |
| 536 | kangcr o(l 39 | Fig. 11 / Area C | rock | ppm | <LOD | 36 | 191 | OD | D | < LOD | < LOD |  | LOD | <LOD | D | 75 | D | 13 | < LOD | OD | 710 | 223 |  | LOD |  |  | LOD |  |  |  |  | LOD |
| 537 | kangcr oll 39a | Fig. 11 / Area C | rock | ppm | <LOD | 39 | 143 | 8.06 | D | < LOD |  |  | LOD | < LOD | OD | 89 | LOD | 67 | < LOD | LOD | 808 | LOD |  |  |  |  | LOD |  |  |  |  | LOD |
| 538 | kangcr ofl 39 | Fig. 11 / Area C | rock | ppm | <LOD | 37 | 267 | < LOD |  | 7 <LOD | < LOD |  | < LOD | < LOD | D | 64 | OD | 32 | < LOD | OD | 48291 | LOD |  | LOD | LOD | LO | LOD |  |  | LOD | LOD | LOD |
| 539 | kangcr o(140 | Fig. 11 / Area C | rock | ppm | < LOD | OD | LOD | < LOD | OD | < LOD | < LOD |  | LOD | < LOD | OD | 18 | LOD | < LOD | < LOD | LOD | 2181 |  | < LOD | < LOD | LO | LOD | LOD | LOD | LOD | LOD | LOD | LOD |
| 540 | kangcr ol 100 a | Fig. 11 / Area C | rock | ppm | <LOD | OD | OD | < LOD | LOD | < LOD |  |  | OD | <LOD | OD | OD | LOD | < LOD | < LOD | LOD |  |  |  |  |  |  |  |  |  |  |  | OD |
| 54 | kangcr of 40 b | Fig. 11 / Area C | rock | ppm | <LO | LOD | LOD |  |  |  |  |  | OD | < LOD | D | 14 | < LOD | <LOD | < LO | LOD |  | LOD |  | LO | LO | LO | LOD | LOD | LOD | LO | LOD | LOD |
| 542 | kangcr o(l 41 | Fig. 11 / Area C | rock | ppm | <LOD | 43 | 165 | LOD |  | 2 | < LOD | < LOD | LOD | < LOD | LOD | 95 | <LOD | 34 | < LO | <LOD | 79517 | LOD | < LOD | LOD | LO | LOD | LOD |  | LOD | LOD | LOD | LOD |
| 54 | kangcr o(l 41 a | Fig. 11 / Area C | rock | ppm | <LOD | 35 | 229 | LOD |  | 2 | LOD |  | OD | 13.3 | LOD | 85 | 73 | 71 | LO | LOD | 6256 | 124 | < LOD | LOD | LOD | LO | 3.55 |  | LOD | LOD | LOD | <LOD |
| 544 | kanger ol 141 b | Fig. 11 / Area C | rock | ppm | <LOD | 43 | 180 | 8.15 |  |  | < LOD | < LOD | D | < LO | LOD | 99 | <LOD | 252 | < LOD | LOD | 77212 |  | < LO | LOD | LOD | LO | LO |  |  |  |  | LOD |
| 545 | kangcr o(142 | Fig. 11 / Area C | rock | ppm | <LOD | 44 | 464 | 7.6 |  | 3 <LOD | < LOD | < LOD | < LOD | < LOD | OD | 107 | D | 152 | 130 | LOD | 53124 | 2288 | < LO | LO | < LOD | < LOD | LO |  | LOD | LO | LO | OD |
| 546 | kangcr ofl 42 a | Fig. 11 / Area C | rock | ppm | <LOD | 56 | 308 | LOD |  | 4 9 | LOD | < LOD | LOD | < LOD | < LOD | 195 | OD | 326 | 126 | LOD | 84534 | 358 | < LOD | LO | LOD | LOD | LOD |  | LO | LOD | LOD | LOD |
| 547 | kangcr ol 142 b | Fig. 11 / Area C | rock | ppm | <LOD | 43 | 250 | 9.07 |  | $3<$ LOD | LOD | OD | LOD |  | LOD | 83 | <LOD | < LOD | < LOD | LOD | 65476 | Lo | < LOD | < LOD | < LOD | LOD | LO |  | LOD | LOD | LOD | < LOD |
| 548 | kangcr o(1 43 | Fig. 11 / Area C | rock | ppm | <LOD | 57 |  | <LOD |  | LOD | D | < LOD |  | LO | OD | 58 | <LOD | 134 | LOD | <LOD | 82468 | LOD | < LOD | LO | LO | LOD | LOD |  | LOD | LO | LOD | LOD |
| 54 | kanger oll 43 a | Fig. 11 / Area C | rock | pp | <LOD | 46 |  | LOD |  | OD | < LOD | LOD |  | 3 < LOD | LOD | 45 | < LOD | 103 | LO | LOD | 66831 | LOD | OD | LO | LOD | LOD | 4.3 |  | LOD | LOD | LOD | LOD |
| 550 | kangcr o(143 | Fig. 11 / Area C | rock | ppm | < LOD | 60 |  | < LOD | 41 | 1 | < LOD | < LOD |  | 2 < LOD | 9.82 | 63 | OD | 102 | 13 | LOD | 89608 | 3040 | LOD | LO | LOD | LOD | LO |  | LOD | LOD | LOD | < LOD |
| 551 | kangcr o(1 44 | Fig. 11 / Area C | ro | ppm | <LOD | 39 |  | LOD | 6 |  | D | D | LOD | < LOD | < LOD | 56 | OD | 72 |  | LOD | 43785 | 1276 | < LOD | LOD | < LOD | LOD | 3.44 |  | LOD | LOD | < LOD | LO |
| 552 | kangcr ol 14 a | Fig. 11 / Area | rock | pp | OD | 36 |  | D |  | LOD | D | < LOD | LOD | < LO | LOD |  | OD |  | < LOD | LOD | 29 |  | LOD | LOD | LOD | LOD | 2.94 |  | LOD | LOD | LOD | LOD |
| 553 | kangcr o(1 44b | Fig. 11 / Area C | rock | ppm | < LOD | 56 |  | OD |  | 7 < LOD | < LOD | < LOD | OD | < LO | OD | 68 | OD | 95 | < LOD | <LOD | 9050 | 3014 | LOD | LO | LOD | LOD | LOD |  | LOD | LOD | < LOD | < LOD |
| 554 | kanger | Fig. 11 / Area C | roc | ppm | < | D |  |  | D | < LOD |  | < LOD |  | 7 <LOD | OD | 24 | OD | < LOD | < LOD | D | 6915 |  |  | LO | LOD | LO | LO | LO | LOD | LO | < LOD | <LOD |
| 555 | kanger oll 45 a | Fig. 11 / Area C | rock | ppm | <LOD | 26 |  | LOD |  | 8 <LOD | < LOD | < LOD |  | 2 <LOD | 10.95 | 63 | OD | 70 |  | <LOD | 45182 | 143 | < LOD | LOD | LOD | LO | LOD | 2.2 | < LO | LO | <LO | LOD |
| 556 | kangcr o(l 45b | Fig. 11 / Area C | rock | ppm | < LOD | 11 |  | LOD |  | < LOD | LOD | < LOD |  | 1 < LOD | < LOD | 52 | OD |  | < LO | LOD | 348 | LOD | LOD | LO | LOD | LOD | LO | LOD | Lod | LOD | LOD | LOD |
| 557 | kangcr o(146 | Fig. 11 / Area C | rock | ppm | <LOD | LOD | < LOD | < LOD | LOD | OD | D |  | OD | < | OD | 13 | D | <LOD | < LOD | OD |  |  |  | LOD | LOD | LOD |  | LOD | LOD | LOD | LOD | LOD |
| 558 | kanger ol 146 a | Fig. 11 / Area C | rock | ppm | <LOD | < LOD | OD | < LOD | D | < LOD | OD | < LOD | LOD | < LOD | LOD | < LOD | <LOD | LOD | < LOD | <LOD |  | LOD | < LO | LOD | < LO | LO | < LOD | < LO | < LO | < LOD | LOD | LOD |
| 559 | kangcr o(l 46b | Fig. 11 / Area C | rock | ppm | < LOD | D | LOD | < LOD | LOD | < LOD | < LOD | < LOD | LOD | < LOD | < LOD | LOD | <LOD | <LOD | < 10 | LOD | 113 | LOD | LOD | LO | < LOD | LO | < LOD | LOD | LOD | LOD | < LOD | LOD |
| 560 | kangcr o(1 47 | Fig. 11 / Area C | rock | ppm | <LOD | 16 |  | < LOD |  | 4 < LOD | < LOD | < LOD |  | 2 < LOD | 10.84 | 47 | < LOD | 78 | < LO | <LOD | 23812 |  | LOD | < LOD | < LOD | LOD | LOD | LO | LO | LO | < LOD | OD |
| 561 | kangcr ol 147 a | Fig. 11 / Area C | rock | ppm | <LOD | 38 |  | < LOD |  | $1<$ LOD | < LOD | < LOD | 10 | 09.57 | < LOD |  | <LOD | 41 |  | <LOD | 33224 |  | LO | LO | LO | LOD | <LOD |  | LOD | LOD | LO | <LOD |
| 562 | kangcr ol 147 b | Fig. 11 / Area C | rock | ppm | <LOD | 64 |  | < LOD |  | 6 < LOD | < LOD | < LOD |  | 4 < LOD | < LOD | 99 | <LOD | 79 | < LOD | <LOD | 105034 | 2706 | LOD | < LOD | LOD | LOD | 4.31 | 2.24 | < LOD | < LOD | < LO | LOD |

## APPENDIX I

Frank Creek Project
Maps and XRF Geochemical Results



Table No. 6
Frank Creek Area A - XRF Sampling Results


Table No. 6


Table No. 6

| XRF No. | Sample No. | Fig. No./Area | Type | Units | Mo | Zr | Sr | U |  | Rb | Th | Pb | Se | As | As Hg | Au | Zn | W | Cu | Ni | Co | Fe | Mn | Sb | Sn | Cd Ag | Nb | Y Bi | Cr | $\checkmark$ | Ti |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 382 | fcc 8405-32b | Fig. 13 / Area A | Rock | ppm | < LOD | <LOD | < LOD | < LOD |  | LOD | < LOD | < LOD | < LOD | <LOD | OD < LOD | <LOD | 20 | <LOD | 28 | <LOD | <LOD | 3058 | < LOD | < LOD | < LOD | < LOD | < LOD | D | < LO | < LOD | OD |
| 383 | 8405-33 | Fig. 13 / Area A | Rock | ppm | <LOD | 93 |  | $2<$ LOD |  | 17 | OD | < LOD |  | 28 | $28<$ LOD | <LOD | 313 | LOD | 109 |  | <LOD | 53259 | 361 | < LOD | LOD < | OD < LOD | 11 | $2<$ | < LO |  | OD |
| 384 | fcc 8405-33a | Fig. 13 / Area A | Rock | ppm | <LOD | 96 |  | $9<$ Lod |  |  | OD | < LOD | < LOD |  | 36 < LOD | DD | 393 | OD | 52 |  | D | 71014 | 488 | LOD | OD | OD | 12 |  |  |  | OD |
| 385 | fcc $8405-33 \mathrm{~b}$ | Fig. 13 / Area A | Rock | ppm | <LOD | 64 |  | 6 < LOD |  | 25 |  | LOD | OD |  | 18 < LOD | LOD | 130 | <LOD | 180 | LO | LOD | 19034 | 198 | LOD | LOD | LOD | 6 | 2 | < LO | LOD | OD |
| 386 | fce 8405-34 | Fig. 13 / Area A | Rock | ppm | <LOD | 93 | 26 | 6 | 8 | 27 |  | < LOD |  | 61 | 61 <LOD | LOD | 185 | LOD | 146 | < Lo | LOD | 41402 |  | < LOD | LOD | OD < LOD |  | D | < |  | OD |
| 387 | fcc $8400-34 \mathrm{a}$ | Fig. 13 / Area A | Roc | ppm | <LOD | 53 |  | 7 < LOD |  |  | <LOD | 36 | 14 |  | $181<$ LOD | <LOD | 306 | <LOD | 200 |  | <LOD | 168808 |  | LO | LOD | LOD < LOD |  | LOD < | < LOD | LOD | OD |
| 388 | fcc 8405-34b | Fig. 13 / Area A | Rock | ppm | < LOD | 88 |  | 2 <LOD |  |  | OD | LOD | < LOD |  | 75 < LOD | <LOD | 178 | <LOD | 141 | < | LOD | 4803 | < LO | LOD | OD | LOD |  | LOD | LOD |  | LOD |
| 389 | fce $8805-35$ | Fig. 13 / Area A | Rock | ppm | 681 | 390 | 179 | 9351 |  | 64 | 248 | 253 | D | < LOD | OD < LOD | LOD | 528 | < LOD | < LOD | < LOD | LOD | LOD | LOD | 379 | LOD | OD < LOD | 128 | $31<$ | < LOD | < LOD | LOD |
| 390 | fcc 8405-35a | Fig. 13 / Area A | Rock | ppm | 5 | 15 |  | 9 < LOD |  | 10 | 7 |  | D | < LOD | OD < LOD | LOD | 63 | <LOD | 137 | < LOD | < LOD | 813 | LOD | 76 |  | LOD < LOD | 10 | 5 < | LO | < LOD | LOD |
| 391 | -405-35b | Fig. 13 / Area A | Roc | ppm | 8 | 14 |  | 4 <LOD |  | 6 |  | OD |  | LOD | OD | OD |  | OD | 113 | < LOD | LOD | 12 | 71 | 36 |  | OD < LOD |  | OD < L | < LO |  | LOD |
| 392 | fcc $8405-36$ | Fig. 13 / Area A | Rock | ppm | 6 | 24 |  | 8 <LOD |  |  | <LOD |  | < LOD |  | $13<$ LOD | < LOD | 93 | <LOD | 148 | < LOD | <LOD | 2155 | LOD | 111 |  | LOD < LOD |  | LOD < L | LOD | LO | LOD |
| 393 | fcc $8400-36 \mathrm{a}$ | Fig. 13 / Area A | Rock | ppm | 16 | 167 | 20 | 0 |  | 33 | 33 | LOD | < LOD |  | $26<$ LOD | < LOD | 526 | < LOD | 74 | < LO | LOD | 65306 | LOD | 64 |  | LOD < LOD | 31 | 5 < | LO | < LO | <LOD |
| 394 | fcc $8405-36 \mathrm{~b}$ | Fig. 13 / Area A | Rock | ppm | 12 | 83 | 14 | 4 |  | 20 | 24 | 34 | LOD |  | $20<$ LOD | < LOD | 272 | < LOD | 303 | LO | <LOD | 5836 | LOD |  | LOD | LOD < LOD | 15 | $2<$ LO | LO | LO | LOD |
| 395 | fcc $8405-37$ | Fig. 13 / Area A | Rock | ppm | 9 | 31 |  | 7 < LOD |  | 19 |  | LOD | <LO |  | 8 <LOD | <LOD | 69 | <LOD | 217 | < LOD | LOD | 296 | LOD | 55 |  | OD < LOD | 9 | $2<$ | LOD | < LO | LOD |
| 396 | fcc $8400-37 \mathrm{a}$ | Fig. 13 / Area A | Rock | ppm | 7 | 47 |  | 0 < LOD |  | 20 |  | LOD | < LOD |  | 27 <LOD | 14.37 | 108 | <LOD | 286 |  | LOD | 32788 | 424 | 71 |  | LOD < LOD |  | LOD < L | LO | LOD | LOD |
| 397 | fcc $8405-37 \mathrm{~b}$ | Fig. 13 / Area A | Rock | ppm | 7 | 28 |  | 1 <LOD |  | 18 |  | < LOD | < LOD |  | 7 < LOD | 12.24 | 100 | <LOD | 273 |  | LOD | 46725 | 362 | 91 |  | LOD < LOD |  | LOD < LOD | LO | < LO | LOD |
| 398 | fc $8405-38$ | Fig. 13 / Area A | Rock | ppm | 8 | 156 |  | 6 <LOD |  | 22 | 23 | LOD | < LOD | OD | OD < LOD | LOD | 112 | OD | LOD | LOD | LOD | 27686 | LOD | 82 |  | OD < LOD |  | LOD < L | < LOD | < LOD | LOD |
| 399 | fcc $8400-38 \mathrm{a}$ | Fig. 13 / Area A | Roc | ppm | <LOD | 114 |  | $5<$ LOD |  | 19 |  | LO | < LOD | <LOD |  | <LOD | 123 | D | 22 | LO | <LOD | 2022 | LOD | LOD | LO | OD < LOD |  | LOD < | LO | < LOD | LOD |
| 400 | fcc $8405-38 \mathrm{~b}$ | Fig. 13 / Area A | Rock | ppm | <LOD | 135 |  | 6 <LOD |  | 28 |  | < LOD | LOD | < LOD | OD < LOD | < LOD | 92 | OD | 36 | < LOD | <LOD | 17094 |  | LOD | LOD | LOD < LOD |  | LOD < L | < LOD | < LOD | LOD |
| 401 | 8405-39 | Fig. 13 / Area A | Rock | ppm | < LOD | 101 |  | 2 <LOD |  | 21 |  | LO | LO | < LOD | OD < LOD | OD | 146 | OD | 60 |  | LOD | 32233 |  | LOD | LOD | LOD < LOD |  | LOD < L | < LOD | < LOD | LOD |
| 402 | fcc $8400-39 \mathrm{a}$ | Fig. 13 / Area A | Rock | ppm | <LOD | 98 |  | 8 < LOD |  | 18 |  | < LOD | LOD | <LOD | OD < LOD | LOD | 180 | < LOD | 74 | < LO | LOD | 31937 | LOD | < LOD | LO | LOD < LOD | 9 | $2<$ | LOD | < LO | LOD |
| 403 | fcc $8405-39 \mathrm{~b}$ | Fig. 13 / Area A | Ro | ppm | <LOD | 116 | 71 |  | 9 | 22 |  | LO | < LOD | LOD | OD < LO | < LOD | 05 | < LOD | 42 | 4 | 122 | 24603 |  | < LOD | LOD | LOD < LOD | 0 | $2<$ | LO | < LO | LOD |
| 404 | fcc $8405-40$ | Fig. 13 / Area A | Rock | ppm | <LOD | 138 |  | 1 < LOD |  | 18 |  | LOD | LOD |  | 7 < LOD | OD | 52 | LOD | 36 | LO | LOD | 18279 |  | LOD | LOD | LOD < LOD |  | LOD < LOD | LO | < LOD | LOD |
| 405 | fcc 8405-40a | Fig. 13 / Area A | Rock | ppm | <LOD | 104 |  | 7 < LOD |  |  | OD | LOD | < LOD | <LOD | OD < LOD | < LOD | 55 | < LOD | 33 | LO | <LOD | 17949 | LOD | LO | LOD | LOD < LOD |  | LOD < L | LOD | < LO | LOD |
| 406 | fcc $8405-40 \mathrm{~b}$ | Fig. 13 / Area A | Rock | ppm | <LOD | 192 |  | 5 < LOD |  | 21 |  | LO | D | < LOD | OD < LOD | <LOD | 55 | < LOD | 31 | < LOD | <LOD | 9056 |  | < LOD | LOD | < LOD < LOD |  | LOD < LOD | LOD | < LO | <LOD |
| 407 | fcc $8405-41$ | Fig. 13 / Area A | Roc | ppm | < LOD | 61 |  | LOD |  |  | OD | LO | < LOD | LOD | OD | OD | 40 | < LOD | 33 | < LOD | OD | 3038 | LO | < LOD | < | < LOD < LOD |  | LOD < L | < LOD | < LOD | LOD |
| 408 | 8405 | Fig. 13 / Area A | Rock | ppm | <LOD | 47 |  | 8 < LOD |  | 25 |  | LOD | LOD | < LOD | OD < LOD | LOD | 64 | < LOD | 27 | LOD | <LOD | 32 | LOD | LO | LO | LOD < LOD |  | LOD < L | < LOD | < LOD | LOD |
| 409 | fcc $8405-41 \mathrm{~b}$ | Fig. 13 / Area A | Rock | ppm | <LOD | 85 |  | 1 <LOD |  | 35 |  | < LOD | < LOD | <LOD | OD < LOD | <LOD | 47 | < LOD | 41 | <LOD | <LOD | 4912 |  | < LO | LOD | < LOD < LOD |  | LOD < L | LO | < LO | <LOD |
| 410 | fcc $8405-42$ | Fig. 13 / Area A | Roc | ppm | < LOD | 8 |  | 3 <LOD |  |  | < LOD |  | < LOD |  | < LO | LOD | 83 | OD | 37 | < LOD | LOD | 2936 | LOD | < LOD | LO | < LOD < LOD | < LOD | LOD < LOD | LO | < LOD | LOD |
| 411 | fcc $8405-42 \mathrm{a}$ | Fig. 13 / Area A | Roc | ppm | <LOD | 40 | 10 | 0 | 6 |  | OD |  | LOD |  | $20<$ LO | OD | 184 | <LOD | 57 | LOD | LOD | 42379 |  | < LOD | LOD | < LOD < LOD | LOD | LOD < | < LOD | < LOD | OD |
| 412 | fcc $8405-42 \mathrm{~b}$ | Fig. 13 / Area A | Rock | ppm | <LOD | 10 |  | < LOD |  |  | OD | <LOD | LOD |  | $11<$ LOD | <LOD | 60 | <LOD | 47 | <LOD | <LOD | 11149 |  | LOD | < LOD | LOD < LO | LO | D < | < LOD | < LOD | LOD |
| 413 | fcc $8405-43$ | Fig. 13 / Area A | Rock | ppm | 4 | 211 | 58 | 8 | 9 | 98 | 18 |  | OD |  | 20 <LOD | < LOD | 279 | <LOD | 93 |  | LOD | 47246 |  | < LOD | LO | LOD < LOD | 18 | $3<1$ | < LOD | < LO | <LOD |
| 414 | fcc $8405-43 \mathrm{a}$ | Fig. 13 / Area A | Rock | ppm | 6 | 172 |  | 2 < LOD |  | 75 | 18 | 91 | 12 |  | 49 < LOD | 12.20 | 375 | < LOD | 672 |  | LOD | 107573 |  | < LOD | LOD | LOD < LOD | 17 | 4 < | < LOD | < LOD | LOD |
| 415 | fcc $8405-43 \mathrm{~b}$ | Fig. 13 / Area A | Rock | ppm | <LOD | 202 | 55 | 5 |  | 90 | 18 | 31 |  | 82 | $28<$ LOD | < LOD | 331 | < LOD | 83 |  | LOD | 64351 |  | < LOD | < LOD | LOD < LOD | 17 | 3 < | < LOD | < LOD | LOD |
| 416 | fcc $8405-44$ | Fig. 13 / Area A | Rock | ppm | <LOD | 66 | 55 | 5 | 7 |  | < LOD |  | < LOD |  | $30<$ LOD | < LOD | 96 | < LOD | 120 | < LOD | < LOD | 21762 | < LOD | < LO | < LOD | < LOD < LOD | 3 | $2<$ | < LOD | < LO | <LOD |
| 417 | fcc $8405-44 \mathrm{a}$ | Fig. 13 / Area A | Rock | ppm | <LOD | 63 | 45 | 5 | 7 |  | < LOD |  | < LOD |  | 27 < LOD | <LOD | 119 | < LOD | 85 | < LO | <LOD | 25128 |  | < LO | < LOD | < LOD < LOD | 3 | 4 < | LO | < LO | <LOD |
| 418 | fcc $8405-44 \mathrm{~b}$ | Fig. 13 / Area A | Rock | ppm | <LOD | 59 |  | 0 < LOD |  |  |  | < LOD | < LOD | < LOD | OD < LOD | < LOD | 54 | < LOD | 41 | < LOD | <LOD | 8556 | < LOD | LO | < LOD | < LOD < LOD |  | LOD < LOD | LO | LO | LOD |
| 419 | fcc $8405-45$ fines | Fig. 13 / Area A | Rock | ppm | <LOD | 111 | 82 | 2 | 9 | 25 | 11 | 31 | 12 |  | $96<$ LOD | < LOD | 312 | < LOD | 199 | < LOD | <LOD | 82524 |  | LOD | LOD | < LOD < LOD | 7 | $3<1$ | LO | < LO | <LOD |
| 420 | fcc $8405-45$ fines a | Fig. 13 / Area A | Rock | ppm | <LOD | 126 | 59 | 9 |  | 31 | 17 | 42 | 15 |  | $89<$ LOD | < LOD | 312 | < LOD | 167 |  | LOD | 76168 |  | LOD | < LOD | < LOD < LOD | 8 | $3<1$ | < LO | < LO | <LOD |
| 421 | fcc $8405-45$ fines b | Fig. 13 / Area A | Rock | ppm | 6 | 137 | 47 | 7 | 7 | 36 | 12 | 62 | 14 |  | 102 < LOD | <LOD | 8 | < LOD | 226 |  | LOD | 85276 | 531 | LO | LOD | <LOD < LOD | 10 | 4 < | < LOD | < LOD | < LOD |

[^0]
[^0]:    In all cases <LOD means below level of detection

