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BC Geological Survey
Assessment Report
38802

Ministry of Energy and Mines
BC Geological Survey

Assessment Report
Title Page and Summary

TYPE OF REPORT [type of survey(s)]: Report on the 2019 Drill Program on the Spius Property **TOTAL COST:** $207,856.42

AUTHOR(S): Gerald G. Carlson **SIGNATURE(S):**

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S): MX-4-726/12October2018 **YEAR OF WORK:** 2019

STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE(S): 5760119/22October2019

PROPERTY NAME: Spius

CLAIM NAME(S) (on which the work was done): 1040680 – SPIUS 15C

COMMODITIES SOUGHT: Cu-Mo

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN: 092HNW027

MINING DIVISION: New Westminster and Nicola **NTS/BCGS:** 92H/14

LATITUDE: 49 ° 55 ' 05 " **LONGITUDE:** 121 ° 16 ' 01 " **(at centre of work)**

OWNER(S):
1) See attachment 2)

MAILING ADDRESS:

OPERATOR(S) [who paid for the work]:
1) Pacific Ridge Exploration Ltd. 2)

MAILING ADDRESS:
1100 - 1111 Melville St., Vancouver, BC, V6E 3V6

PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude):
Spius, porphyry, copper, molybdenum, Eagle Granodiorite, feldspar porphyry, chalcopyrite, pyrite, quartz-sericite-pyrite alteration

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS:
3052, 5389, 6145, 33913, 36631, 38070

Next Page

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
GEOLOGICAL (scale, area)			
Ground, mapping			
Photo interpretation			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic			
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne			
GEOCHEMICAL (number of samples analysed for...)			
Soil			
Silt			
Rock			
Other			
DRILLING (total metres; number of holes, size)			
Core	1,087 m	SPIUS 15C	$207,856.42
Non-core			
RELATED TECHNICAL			
Sampling/assaying			
Petrographic			
Mineralographic			
Metallurgic			
PROSPECTING (scale, area)			
PREPARATORY / PHYSICAL			
Line/grid (kilometres)			
Topographic/Photogrammetric (scale, area)			
Legal surveys (scale, area)			
Road, local access (kilometres)/trail			
Trench (metres)			
Underground dev. (metres)			
Other			
		TOTAL COST:	$207,856.42

Owners:

Michael A. Blady (25%, FMC no. 278776),
335 – 1632 Dickson Ave.,
Kelowna, BC, V1Y 7T2

Gerald G. Carlson (25%, FMC no. 104271),
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Christopher R. Paul (25%, FMC no. 269478)
335 – 1632 Dickson Ave.,
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Report on the 2019 Drill Program

on the

SPIUS PROPERTY

Spius Creek, New Westminster and Nicola Mining Divisions, British Columbia

NTS: 92H/14

2019 Work Centred at Approximately:

49°55'05" N Latitude, 121°16'01" W Longitude
624,405 m E, 5,530970 m N, UTM NAD 83, Zone 10N

Owners and Optionors:

Michael A. Blady (25%, FMC no. 278776),
Gerald G. Carlson (25%, FMC no. 104271),
John A. Chapman (25%, FMC no. 104633),
Christopher R. Paul (25%, FMC no. 269478)

For Work Performed between March 15 and October 15, 2019

by

Gerald G. Carlson, Ph.D., P.Eng.

October 22, 2019

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SUMMARY

The Spius mineral property (the "Property") is in the Nicola and New Westminster Mining Divisions, British Columbia, 40 km southwest of Merritt and 10 km east-northeast of Boston Bar. The Property is in the Spius Creek watershed centered at approximately 49°55'05" N and 121°16'01" W on NTS map sheet 92H/14 and is known in MINFILE as "Gossan" (No. 092HNW027). The Property comprises seven mineral claims covering 2,205.5 hectares.

The Spius claims are accessed from Merritt by heading SE for 25 km on the Coldwater Road to the well-maintained Patchett/Spius FSR. The Property lies within the Eagle Plutonic Complex: Rocks within the Property are mainly biotite granodiorite, with younger feldspar porphyry and quartz-feldspar porphyry intruded by felsic and lamprophyre dikes. The Copper Zone, in the central part of the Property, is defined by a strong copper soil geochemical anomaly, with associated anomalous molybdenum, with a surrounding pyritic alteration zone. Although the Copper Zone is mainly till covered, mineralization has been observed mainly in float and occasionally in outcrop and includes secondary copper mineral, including malachite and azurite, locally chalcopyrite in stockwork veins and disseminations and minor molybdenite.

Exploration dates to the 1960's, when Orequest Exploration Syndicate (1969), Murray Mining (1969), Arrow Inter-America (1970), Brascan Resources (1971 and 1974) and Canadian Occidental Petroleum (1976) explored the claims. Work during this period included geological mapping, soil sampling, IP and EM geophysical surveys, road building, trenching and drilling (10 percussion drill holes and 12 diamond drill holes), all less than 100 m depth. Unfortunately, the data from most of this work was not recorded in assessment reports and has now been lost.

In 2012, J.T. Shearer made a significant new Cu soil geochemical discovery along the Spius lower access road approximately 250 m south of the previously defined Copper Zone.

In 2016, the current owners acquired the claims by staking. In 2016 and 2017, they confirmed and expanded the Copper Zone anomaly through prospecting and additional sampling.

In 2017, Bruce and Patricia Bried ("Bried") optioned the Property and completed additional prospecting work and soil sampling.

In 2018, the Property was acquired from Bried by Pacific Ridge Exploration Ltd. ("Pacific Ridge"). In October 2018, Pacific Ridge completed a program of B horizon soil sampling and an IP geophysical survey. The soil survey confirmed and better defined the Copper Zone anomaly as outlined by earlier workers. The IP survey shows a horseshoe-shaped chargeability anomaly that surrounds and partially overlaps the Copper Zone anomaly.

In 2019, Pacific Ridge completed a four-hole, 1,087 m diamond drilling program to test the Copper Zone. Holes were targeted to test the strongest soil geochemical values, guided by the 2018 IP survey results. All holes intersected porphyry style alteration and mineralization. The best mineralization was encountered at the bottom of hole SP-19-03, drilled at the northern end of the Copper Zone, encountering 51.8 m averaging .099% Cu (224.3 to 273 m), including 39.0 m at .113% Cu. (237-276 m) Hole SP-19-04. located 200 m south of hole 3, encountered 81.0 of 0.071% Cu, (179 to 263 m) including 19.4 m at 0.116% Cu (182-200 m), also at the bottom of the hole. Hole SP-19-02, drilled 700 m southwest of hole 3,

encountered 25.4 m at 0.0554% Cu and 0.0038% Mo (140.7 to 166 m) and 20.0 m at 0.557% Cu and 0.0018% Mo (250 to 270 m). All drill holes encountered porphyry-style mineralization and alteration top to bottom, with variably anomalous Cu and Mo values and locally anomalous Ag throughout.

The 2019 drill program confirmed the presence of porphyry style mineralized system associated with a porphyritic biotite granodiorite in the upper or northern part of the Copper Zone. Mineralization occurs mainly within the foliated biotite granodiorite, but both mineralization and alteration are spatially associated with the porphyritic granodiorite, which appears to be syn-mineralization and likely the causative intrusion. The biotite latite porphyry occurs within the porphyritic granodiorite, appears to be co-magmatic, but it is unmineralized and therefore post-mineral.

The drill program encountered several intersections of sub-ore grade mineralization in holes SP-19-02, 03 and 04 (Table 3), while hole SP-19-01, drilled in the lower or southern portion of the system, encountered only weak mineralization and alteration. This suggests that the potential for higher grade mineralization lies at depth and to the north, associated with the porphyritic granodiorite. The 2019 drilling appears to have tested only the southern fringe of this intrusion, although its full extent is unknown due to its lack of exposure. The drilling failed to encounter a lithology or mineralization similar to the high grade (2.56% Cu) felsic intrusive float that was discovered in 2016, approximately 150 m north of hole SP-19-02 and 150 m west of SP-19-03, slightly upslope from both holes.

INTRODUCTION

The Spius property (the “Property”) covers a MINFILE porphyry Cu-Mo showing (092HNW027) known as “Gossan”. The Property is 2,205.5 ha in size, centred on the headwaters of Spius Creek. Access to the Property is via the Spius Creek FSR, which is deactivated for the last 10 km leading into the claims.

The Property is well located, with excellent infrastructure and local resources in the nearby service center of Merritt. The Cu-Mo mineralization and widespread alteration observed suggest the presence of a large hydrothermal system with a zoned pattern characteristic of porphyry copper systems. Only a small portion of the prospective ground staked has been drill tested. Given the similarities in geology (granodiorite batholith), age (Late Triassic-Early Jurassic), genetic relations (Quesnel Terrane) and alteration (EDM veins and secondary muscovite) to the nearby Highland Valley Copper Mine, good potential exists for the discovery of a similar bulk-tonnage copper-moly porphyry deposit

This report documents a four-hole, 1,087 m drill program testing the Copper Zone anomaly. All holes intersected porphyry style alteration and mineralization, with variably anomalous Cu and Mo values and locally anomalous Ag throughout. The best mineralization was encountered at the bottom of hole SP-19-03, drilled at the northern end of the Copper Zone, encountering 51.8 m averaging .099% Cu (224.3 to 273 m), including 39.0 m at .113% Cu. (237-276 m) Hole SP-19-04. located 200 m south of hole 3, encountered 81.0 of 0.071% Cu, (179 to 263 m) including 19.4 m at 0.116% Cu (182-200 m), also at the bottom of the hole. Hole SP-19-02, drilled 700 m southwest of hole 3, encountered 25.4 m at 0.0554% Cu and 0.0038% Mo (140.7 to 166 m) and 20.0 m at 0.557% Cu and 0.0018% Mo (250 to 270 m).

The total cost of the work to be applied for assessment is $207,856.42.

LOCATION AND ACCESS

The claims are in southwestern British Columbia (Figure 1), approximately 10 km east-northeast of Boston Bar and 40 km southwest of Merritt, BC. The Property is centered at approximately 49◦55’05” N latitude and 121◦16’01” W longitude on NTS map sheet 92H/14.

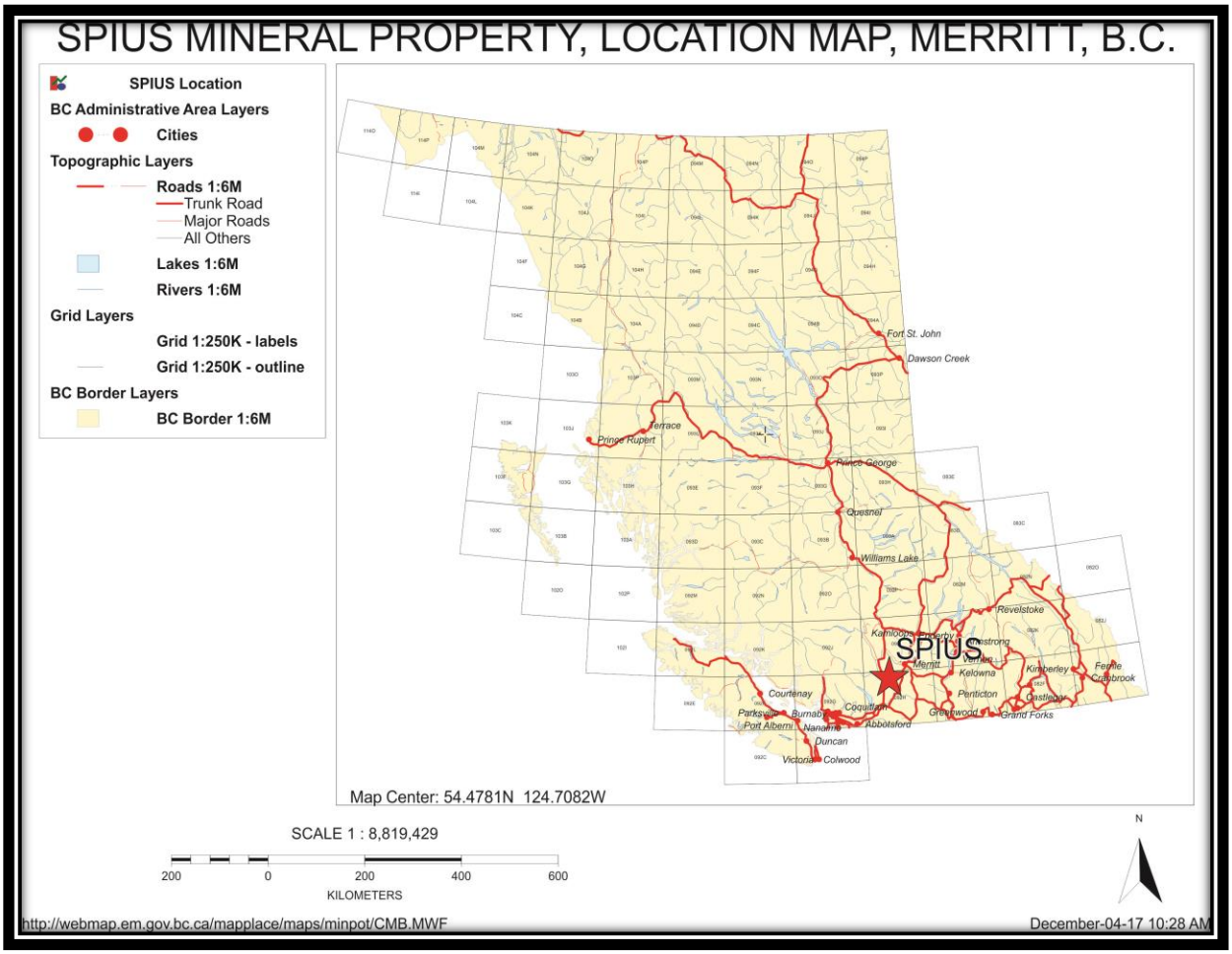

Figure 1. Spius property location map.

The claims are accessed from Merritt (Figure 2) by heading southeast on Coldwater Road for 25 km and then west onto Patchett Road, a ranch road which ends at kilometer 11 and becomes the Spius Creek FSR, which is also the boundary of cellular service. At kilometer 25 of the Spius Creek FSR, a right turn is made over a bridge, followed by an immediate left onto the deactivated final section of the Spius Creek FSR, which continues for another 8.4 km, where it forks upon entering the Property. A right turn at the fork traverses the northern section of the claim block, while a left continues along the north side of Spius Creek and becomes heavily overgrown with alder and willow bushes for 8.5 km across the entire length of the Property. Several kilometers of brush were cleared on either side of the road in 2016, making enough room for a 4x4 truck to pass through. An overgrown bulldozer trail traverses north across the area of historical work up from the Spius Creek FSR.

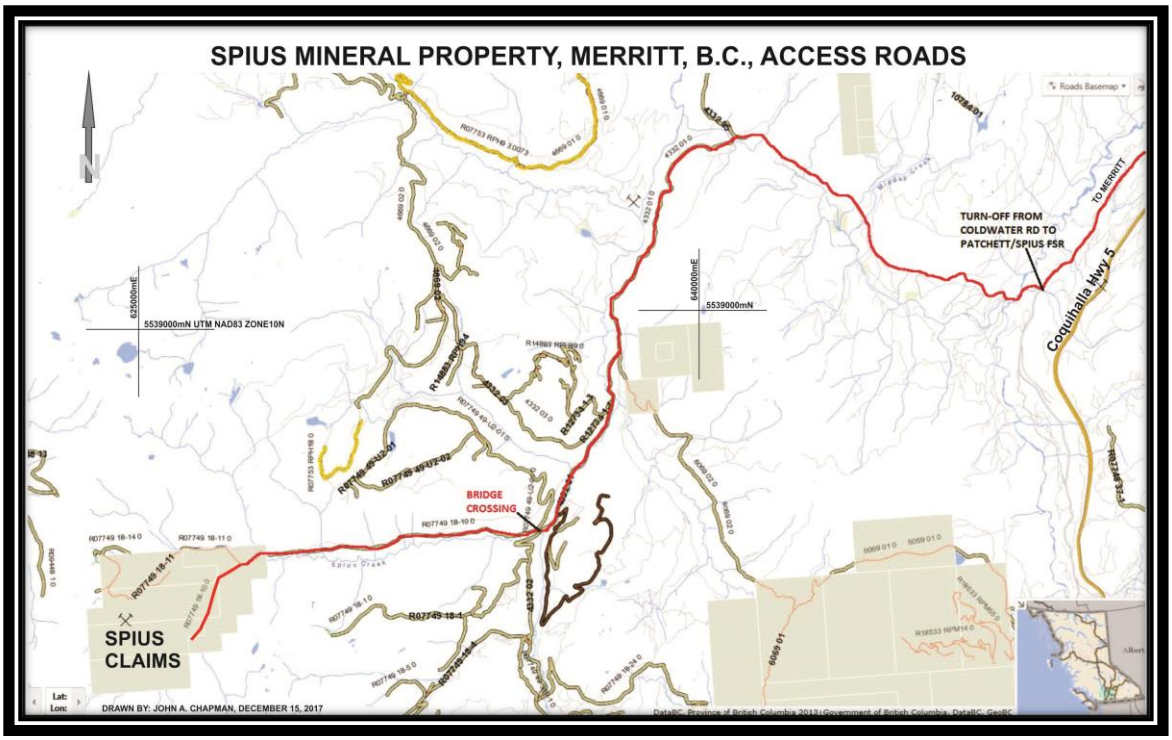

Figure 2. Spius property access from Coldwater Road.

Alternatively, a helicopter can be chartered from Merritt, approximately a 25-minute ferry time from the claims.

PHYSIOGRAPHY AND CLIMATE

Geographically, the claims lie along the eastern edge of the Pacific Coastal Mountains. Elevations range from 1100 m at Spius Creek to 1,840 m at the highest point in the headwaters. The claims are centered on Spius Creek, with the mineral showings situated on a moderately steep south facing slope. Most rock outcroppings are limited to higher elevations and creek drainages. Seasonal exploration surveys can commence from about early June and normally end by late October.

The project area lies within the transition zone between the rugged Coast Mountains to the west and the rolling Interior Plateau physiographic province to the east. Relief is moderate on the claims, generally less than 600 m, with a mean elevation of 1400 masl. Topography is dominated by rocky ridges, which transition downward into colluvium-covered slopes, with alluvium-filled valley bottoms.

The climate is characterized by warm summers with temperatures ranging from 10 to 25^{o} C and cold winters typically in the -10^{o} C to -15^{o} C range. The claims are situated just west of the interior rain shadow, and as such receive abundant precipitation carrying over from the Coast Mountains.

CLAIM STATUS

The Spius Property comprises 7 mineral claims covering 2,205.5 ha. Pacific Ridge is the recorder owner of a 100% interest in the claims while the beneficial owners are John A. Chapman (25%), Gerald G. Carlson (25% - held on behalf of KGE Management Ltd.), Christopher R. Paul (25%) and Michael A. Blady (25%) (Table 1 and Figure 3). The claims are in good standing to June 10, 2025, except for Spius 18A, which is good to December 13, 2019, prior to the application of the work described in this report.

Table 1. Summary of tenure data.

Number	Name	Owner	NTS	Good to Date	Area (ha)
1040680	SPIUS15C	Pacific Ridge Exploration Ltd.	092H	2025/JUN/10	270.46
1040681	SPIUS15B	Pacific Ridge Exploration Ltd.	092H	2025/JUN/10	312.02
1040682	SPIUS15A	Pacific Ridge Exploration Ltd.	092H	2025/JUN/10	249.57
1041084	SPIUS15D	Pacific Ridge Exploration Ltd.	092H	2025/JUN/10	249.7
1042505	SPIUS16A	Pacific Ridge Exploration Ltd.	092H	2025/JUN/10	332.8
1044594	SPIUS16B	Pacific Ridge Exploration Ltd.	092H	2025/JUN/10	686.91
1065095	SPIUS18A	Pacific Ridge Exploration Ltd.	092H	2019/DEC/13	104.01
				Total	**2205.47**

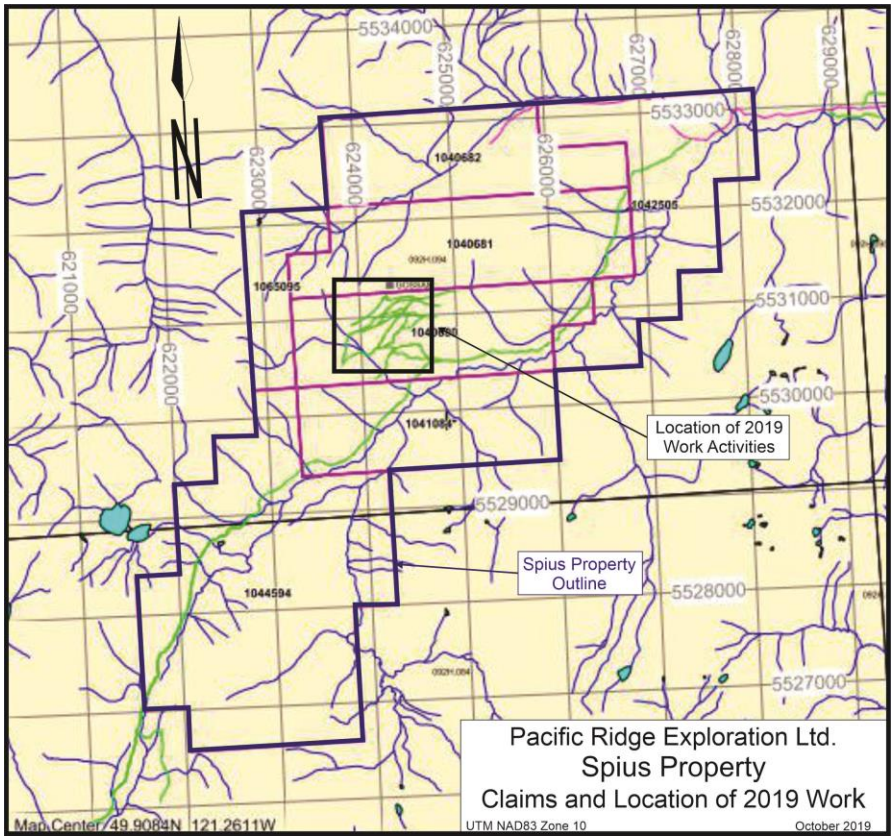

Figure 3: Spius property claim map and location of 2019 work.

EXPLORATION HISTORY

1968 - Orequest Exploration Syndicate optioned the Property from prospectors Clayton (Slim) Powney and John E. Nott and carried out trenching, geophysical and geochemical surveys, geological mapping and five diamond drill holes. Mapping revealed widespread mineralization containing appreciable pyrite along with some chalcopyrite and lesser chalcocite and molybdenite. Assays of the soil samples for copper and molybdenum showed sizeable parallel anomalous zones extending down the sidehill (Allen, 1969) with very high values up to 7,000 ppm Cu (George, 1976). The diamond drill holes were in the center of the Property, mostly within a feldspar porphyry intrusion, mostly within a pyritic gossan near the top of the copper soil anomaly. Results of the drilling were not made available; however, a later Property File reports that DDH#2 intersected good mineralization in the bottom 60 ft (18.3 m), with the last 8 ft (2.43 m) ending in 0.42% Cu (Allen, 1969).

1969 - Murray Mining improved and re-located a portion of the access road from Merritt and constructed over 8 miles of new road to connect with logging roads leading into Boston Bar. In addition, trenches and switchback roads on the Property were cleared and extended. An electromagnetic survey was completed over part of the area, defining a 1700-foot-long conductor striking north 65 degrees east on the southwest side of Canyon Creek. The field distortion was strong and interpreted to be the result of sulphide mineralization at shallow depth. Ten percussion holes were drilled to a maximum depth of 300 ft to the east of Canyon Creek, with the closest hole being 400 ft (122 m) north and 200 ft (61 m) higher than the EM conductor zone (Figure 6.1). Each hole contained considerable pyrite; however, no significant copper-molybdenum mineralization was intersected (Allen, 1969).

1970 – Arrow Inter-America Corporation conducted an IP survey which revealed that most of the rocks underlying the grid to a depth of 300 ft (91.5 m) contain 1-3% by volume of sulphide minerals. Observed chargeability values range from 1.0 to in excess of 30.0 milliseconds (ms). Most of the survey area exhibited chargeability responses in excess of 10.0 ms (Figure 6.1), which is a moderate chargeability level by normal standards. It was concluded that since the increased chargeability responses are so widespread, that it was difficult to recommend targets for further investigation based on the geophysical results alone (Fominoff, and Baird, 1970). A 1976 report by Canadian Occidental Petroleum Ltd. indicates that Arrow Inter-America also conducted a magnetometer and soil geochemical survey and geologically mapped the area, however the results are not available (George, 1976)

1971 – Brascan Resources Limited drilled 7 diamond drill holes on the Property, the results of which are not available, nor discussed in any later reports. The collar locations are shown on a 1974 compilation map by Brascan. They appear to have been drilled on a 500 m grid pattern.

1974 – Brascan Resources Limited carried out 8,400 ft (2,560 m) of road work and 6,300 ft (1,920 m) of trenching. The road cuts and trenches tested an alluvium covered area having a coincident magnetic high, chargeability low, greater than 500 ppm Cu soil anomaly and a molybdenum soil anomaly. Mapping of the trenches found that better copper mineralization is associated with pink feldspar and quartz veining. Alteration minerals including secondary muscovite, biotite, quartz and feldspars were noted (Gannon, 1974).

1976 – Canadian Occidental Petroleum Ltd. spent two days collecting approximately 100 soil and stream sediment samples, as well as examining outcrops on the Property. The geochemical results corresponded

quite well with Orequest's prior survey, returning values of up to 2,970 ppm Cu and 230 ppm Mo. Contouring of the values delineated an area of 2,000 ft (610 m) by 1,500 ft (457 m) of greater than 500 ppm Cu in the central part of the grid, surrounding an area of 2,000 ft (610 m) by 400 ft (122 m) of greater than 1,000 ppm Cu, open to the south (see Figure 6.1). Nine stream sediment samples returned values from 120 to 3,600 ppm Cu, with 5 values of greater than 1,000 ppm Cu. The conclusions of the 1976 report were that further work should be concentrated in the central area, bearing the large high value Cu soil geochemical anomaly and strong sericite alteration, as all the historic drilling had been focused outside of this zone (George, 1976). No further work however was conducted by Canadian Occidental on the Spius claims.

2012 – J.T. Shearer staked the area covering the Spius Property and collected 40 soil samples at 15 m spacing for 600 m along the Spius Creek FSR, below the central copper anomaly described above by Canadian Occidental. The results again confirmed the presence of very high copper values and extended the anomaly to the south, with up to 4,640 ppm Cu and 20 ppm Mo. Most samples were over 500 ppm Cu.

2015 & 2016 – The Property was staked by Chris Paul, Gerald Carlson, Mike Blady and John Chapman ("Owners"). The Owners conducted geological and geochemical exploration work on the Property (Paul and Carlson, 2016), confirming the Shearer anomaly and discovering a boulder of high grade, porphyry style disseminated copper float that assayed 2.56% Cu.

2017 – The Property was optioned to Bruce and Patricia Bried ("Bried"), who completed additional prospecting and soil sampling (Bried and Chapman, 2018), confirming and expanding the central Copper Zone soil anomaly.

2018 –The Property was acquired from Bried by Pacific Ridge Exploration Ltd. ("Pacific Ridge") who completed a program of B horizon soil sampling and an IP geophysical survey. The soil survey confirmed and better defined the Copper Zone anomaly as outlined by earlier workers. The IP survey shows a horseshoe-shaped chargeability anomaly that surrounds and partially overlaps the Copper Zone anomaly.

GEOLOGICAL SETTING

The regional geological framework is prominently marked by a major break along the Fraser River the Fraser River – Straight Creek fault system. The fault system represents a suture-like zone between two accreted terranes (Cadwallader and Bridge River terranes) and has produced a zone of ductile deformation favourable for hosting mineralization. The general claim area is underlain by the Mount Lytton Complex, a major, 160-km-long intrusive complex trending northwest through central British Columbia. About 8 km to the west, the granitic rocks are in faulted contact with sediments of the Lower Cretaceous Jackass Mountain group

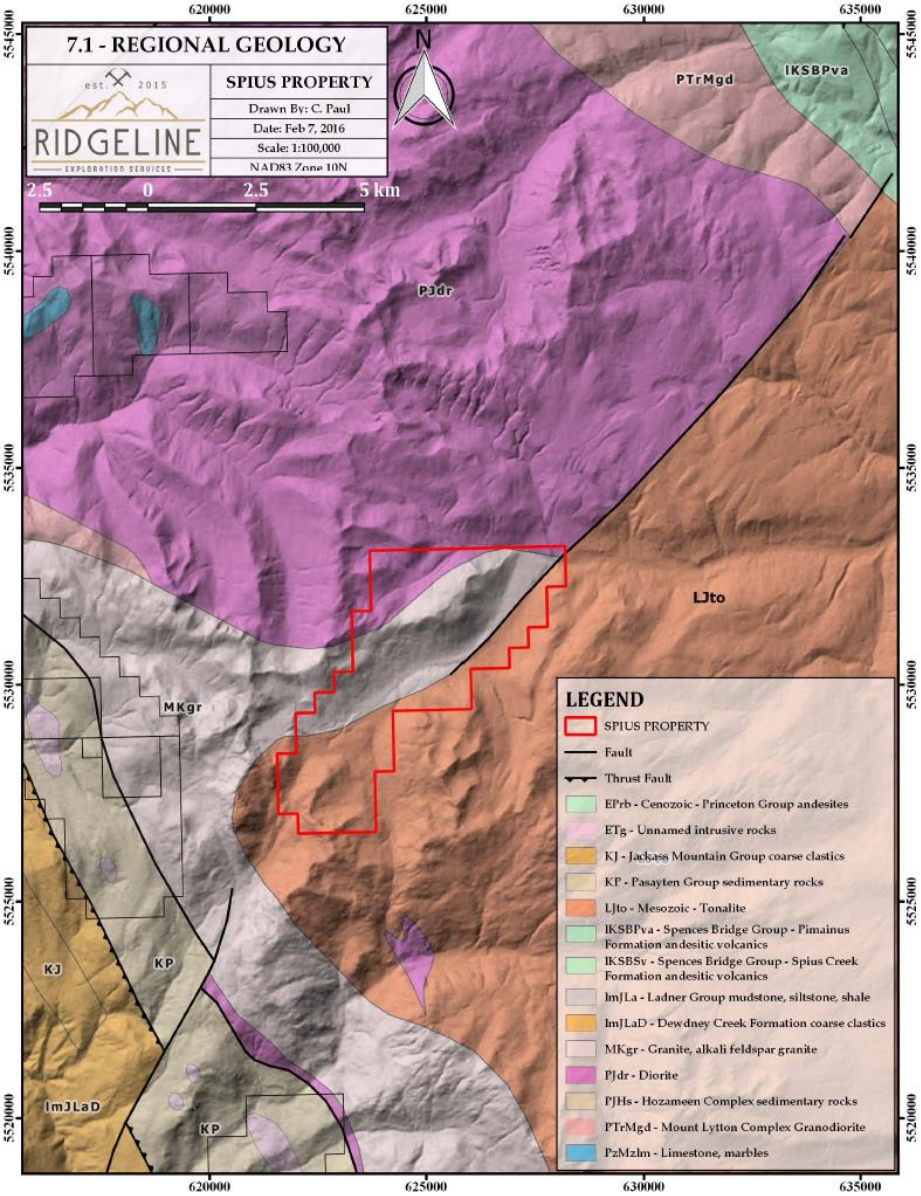

Figure 4. Spius property regional geological setting.

Property Geology

The following description of the Property geology is taken mainly from Allen (1969, 1970), Gannon (1974) and Paul and Carlson (2017). The central part of the Property is mostly underlain by a strongly foliated, coarse-grained biotite granodiorite, mapped by the G.S.C. as the Eagle Granodiorite (Gd) of Jurassic or later age (Journeay and Monger, 1984). Based on field relations, the unit is interpreted to pre-date copper mineralization on the Property. Sulphide minerals, mostly pyrite, occur as disseminations and fracture coatings throughout the Eagle Granodiorite. Small, irregular, quartz-feldspar pegmatite bodies intrude the Eagle Granodiorite in several areas, some of which are mineralized.

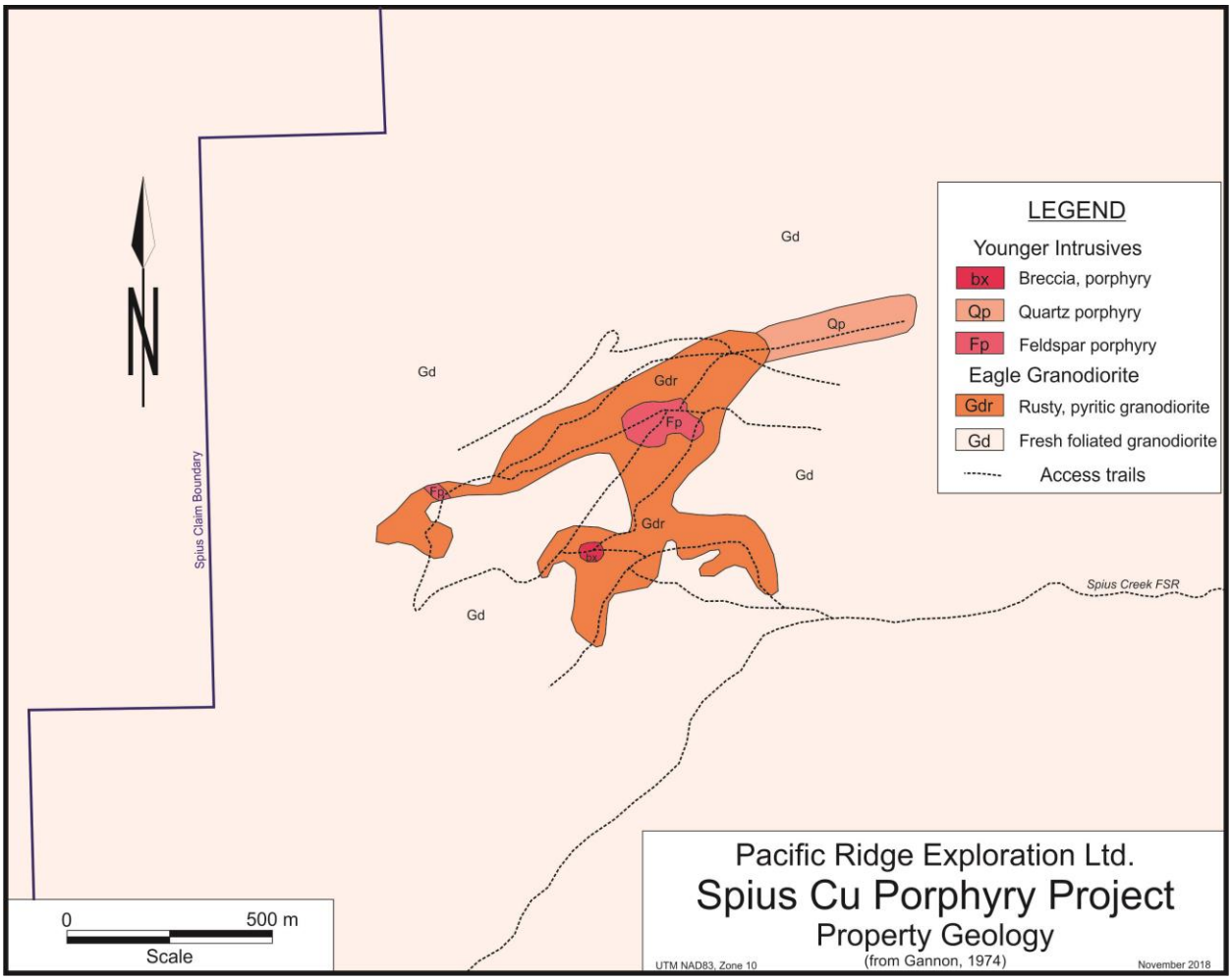

Figure 5. Spius property local geology (interpreted from Gannon, 1974).

A hornblende-feldspar dacite porphyry noted by its quartz eyes (Qp) occurs predominantly on the east side of the claim block is a (Figure 5) consisting of 15% plagioclase phenocrysts to 1 cm, 5% to 10% quartz eye phenocrysts to 0.5 cm and less than 2 % euhedral pyrite in up to 2 cm across and containing inclusions of quartz-eye phenocrysts. Many of the pyrite cubes are oxidized to produce vugs and resulting in a slight gossanous colour to the outcrops. It is not known whether the pyrite cubes are

porphyroblasts or phenocrysts. Although they are not associated with fractures or veins, the former possibility seems to be more likely due to their euhedral and poikilitic character. The rock is massive, very weakly jointed and altered. Quartz veins are rare in the unit and sericite was not noted. The Qp is strongly kaolinized, which may be aided by pyrite oxidation and weathering, to produce acidic ground water.

To the north and west of the claim block, pyrite and sericite concentrations decrease, grading into a barren foliated granodiorite to the north and contacting a leucocratic granodiorite with a weak foliation to the west. The central and northern granodiorite foliation trends from 160° to 200° with a dip of 70° to 90° to the west. The granodiorite to the west has a weak N-S foliation.

A quartz-feldspar porphyry plug (Fp) intrudes the Eagle Granodiorite near the upper end of the copper anomaly (Figure 7.2). The rock is dark grey, unfoliated and contains approximately 20% euhedral, kaolinized plagioclase crystals to 1 cm in diameter. An intense quartz stockwork with minor sulphide cuts the feldspar porphyry. B.Y. Kim mapped and described the area for Arrow Inter-America in 1971 and interpreted the Fp to be the locus of mineralization in the area (George, 1976). Paul (2017) disagrees with this interpretation, arguing that the unit is small, and several grab samples collected from it in 2016, including samples containing high sulfide and quartz veins returned very low copper and molybdenum concentrations. According to Brascan's 1974 work plan, the unit never reaches more than 200 ft (61 m) in thickness (Gannon, 1974). It seems unlikely that this small, barren unit is the source of the mineralized fluids capable of widespread alteration and mineralization elsewhere on the Property, however at this stage, an alternative causative intrusive has not been found. A float boulder discussed later in this report, which assayed 2.56% Cu and displays intense potassic and sericitic alteration in a unique, unfoliated intrusive lithology may be a more viable alternative, however the bedrock source of this sample has yet to be located.

Lamprophyre and felsic dykes intrude the older intrusions but are of minor importance.

Alteration and Mineralization

Pyrite is widespread throughout the altered and sheared zones on the Property. The northeasterly exposures contain coarse cubic pyrite scattered throughout highly kaolinized, but massive quartz-eye porphyry rock. The central and western outcrops exhibit finely disseminated pyrite throughout finer-grained but silicified and sericitized granitic rocks. There is one outcrop of breccia composed of coarse angular fragments of altered granodiorite and quartz feldspar porphyry, with pyrite throughout. In places chalcopyrite is associated with the pyrite, mostly noted in and near fractured rock veined with quartz-K-feldspar veins.

Molybdenite has been noted locally associated with chalcopyrite and chalcocite within quartz veins at the Gossan Zone. Malachite and azurite oxidation typically coat copper mineralized exposures.

The strongest alteration observed was at the Gossan Zone where phyllic quartz-sericite-pyrite ("QSP") alteration was observed throughout as both fine-grained sericite as well as large flakes of secondary muscovite accompanying silicification, quartz-sulfide veining, and pyrite. Oxidation of sulfides give the rocks a vuggy texture, with bright yellow and orange oxides coating all surfaces. Minor potassic alteration

was also observed at the Gossan Zone, mostly restricted to vein selvages as growths of secondary biotite as well as a pink hue around the veins indicating potassium metasomatism of feldspars.

Little outcrop is found west of the Copper Zone, however altered float rocks were found along the upper roadcuts, with both phyllic and potassic alteration. Also located in the same area was a set of Early Dark Mafic ("EDM") veins cutting a malachite-stained and weakly k-spar altered intrusive rock. Pervasive potassium feldspar and sericite alteration also occurs within a strongly mineralized float boulder assaying 2.56% Cu, located along the upper roadcut.

2019 Exploration Program

Between June 2 and June 19, 2019, The Company completed a four-hole, 1,087 m drill program to test the Spius Copper Zone anomaly. All holes were drilled from existing exploration trails using a track mounted hydraulic drill and sloop for drill rods. The drill contractor was Paycore Enterprises Ltd. ("Paycore") of Valemount, B.C. Exploration trails were cleared for use by a two-person crew from Fusion Timber Inc. and a backhoe from GF Contracting, both from Merritt, B.C. Assaying and geochemical analysis of drill core was completed by MSA Mineral Services Analytical Inc. ("MSA") of Langley, B.C.

On September 26, 2019, a crew of two geologists and a sampler from Ground Truth Exploration prospected in the vicinity of the

Drill Program

A five-person crew from Paycore, including a foreman, two drillers and two helpers completed the drill program with two 12-hour shifts. All holes were drilled with NQ core. Access to the south-central part of the property was by pick-up truck and thence along the exploration trails using quads and a side-by-side. Accommodation and drill core logging were at a rented cabin on the Cold Water Ranch, approximately one-hour drive east of the Property at Km 7.5 of the Spius FSR. Mineralized core was split with a manual splitter. Blank and standard samples were alternated approximately every 10 samples. Samples were delivered to MSA by truck or local delivery service.

The drill hole statistics are shown in Table 2 and the hole locations are shown in Figure 6. Drill logs are included in Appendix II, assay results summary in Appendix I and assay certificates in Appendix III.

Table 2. 2019 drill hole statistics.

Hole	Easting	Northing	Eleva(m)	Azimuth	Dip	Depth(m)
SP-19-01	624793	5530529	1,219	60	-45	260
SP-19-02	624073	5530878	1,450	60	-70	285
SP-19-03	624257	5531035	1,459	0	90	276
SP-19-04	624422	5531000	1,427	130	-45	266
	NAD83, Zone 10				**Total**	**1,087**

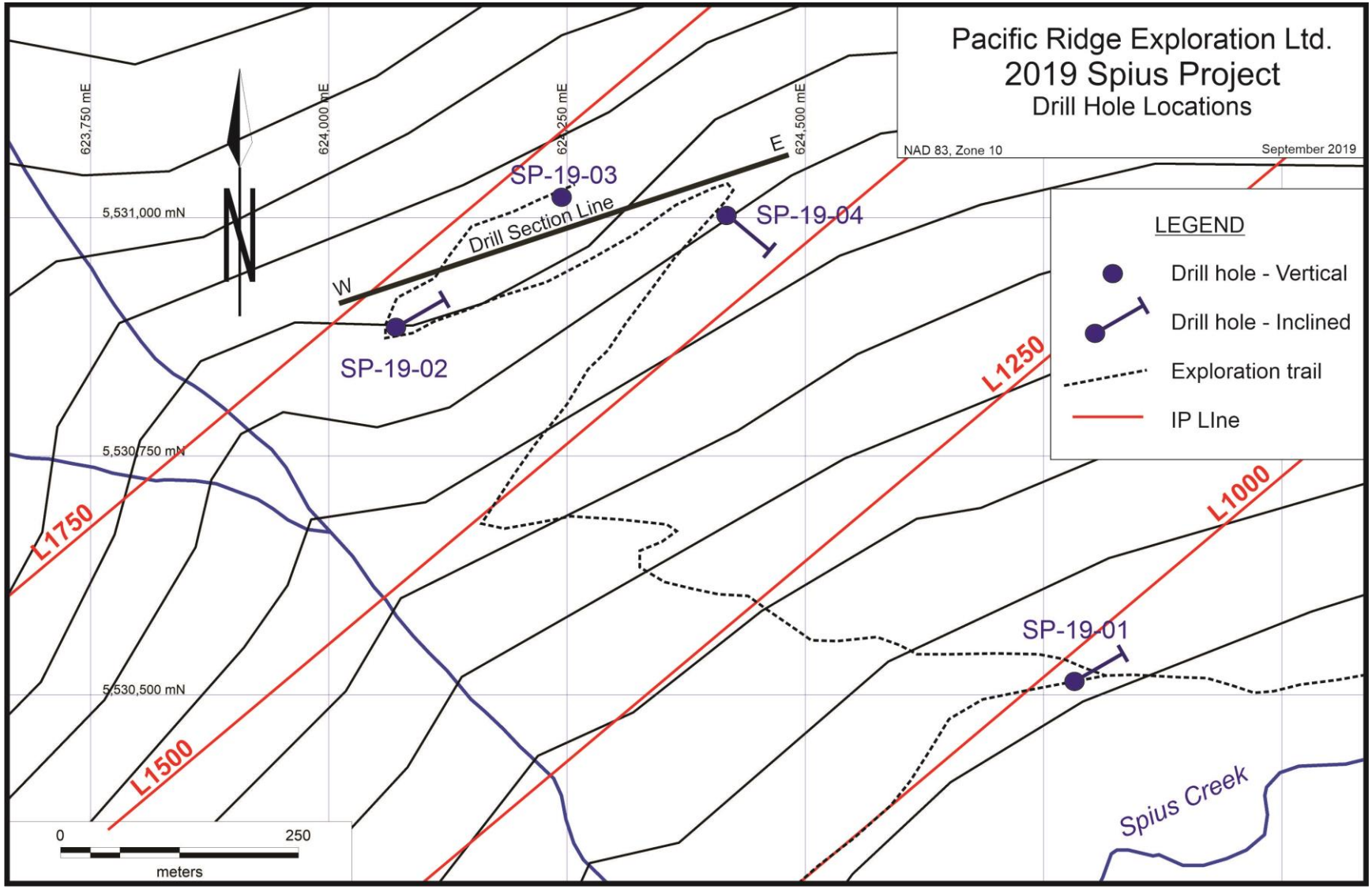

Figure 6. Spius project 2019 drill hole location plan.

Drill Results

Assay highlights for the drill program are shown below in Table 3. Individual drill hole targets and results are described below. Drill hole targets are shown in Figures 7 to 9 while copper assay results and lithology are shown graphically in Figures 10 to14. Summary logs are shown in Appendix I, drill logs in Appendix II and Assay Certificates in Appendix III.

Table 3. 2019 drill results highlights.

Hole No.	From(m)	To(m)	Interval(m)	Cu(%)
SP-19-02	140.7	166.0	25.4	0.055
SP-19-03	224.2	276.0	51.8	0.099
includes	237.0	276.0	39.0	0.113
SP-19-04	179.0	263.0	84.0	0.071
includes	182.0	200.0	18.0	0.112

Hole SP-19-01

Drill hole SP-19-01 was targeted on the strong soil anomaly at the base of the Copper Zone and also on the transition from low chargeability to higher chargeability on IP section 1000N.

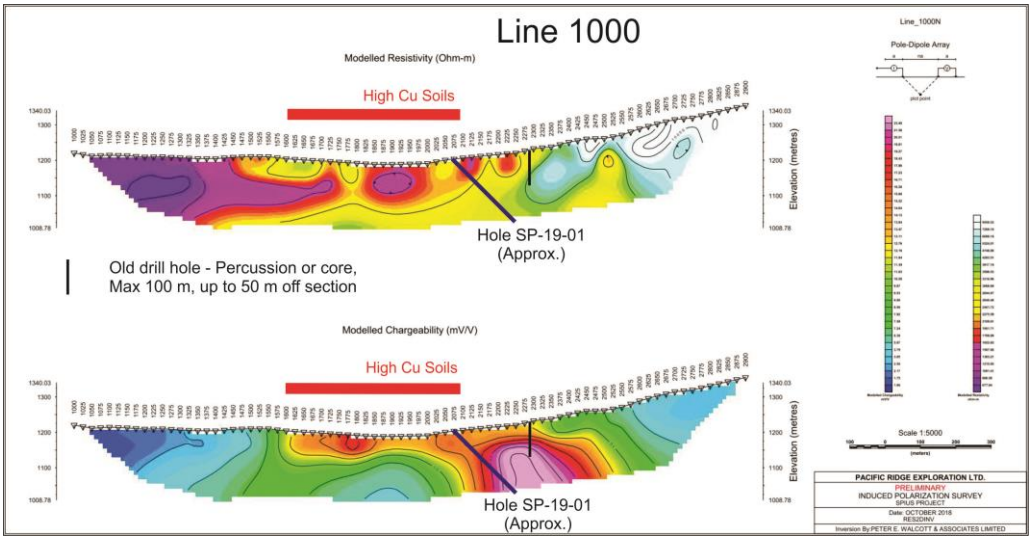

Figure 7. Target, drill hole SP-19-01.

The hole was in strongly foliated biotite Eagle Granodiorite throughout, with minor pegmatitic intrusions, typically less than one m in thickness. The top of the hole has undergone weak propylitic alteration, with 1 to 10% disseminated pyrite and, up to 5% epidote with local siliceous bands. Minor quartz-chlorite+/- pyrite veins are observed throughout. Below 225 m depth in the hole, alteration becomes more intense

with increasing and thicker quartz-pyrite-chlorite veins, silicification, sericite and possibly potassic alteration to the end of the hole (260 m). This perhaps explains the increased chargeability noted on L1000.

Copper values are weakly anomalous throughout the hole (Figure 10), not exceeding 160 ppm. There was no appreciable increase in copper content with increasing alteration and vein intensity towards the bottom of the hole. Molybdenum values are also weakly anomalous, with a single high value of 271.8 ppm between 224 and 225.9 m where molybdenite was observed in quartz veinlets associated with K-feldspar-quartz-pyrite alteration and a narrow pegmatitic intrusion.

Hole SP-19-02

Hole SP-19-02 (Figures 11 and 14) was directed to intersect the approximate area where a previous drill hole had encountered 8 ft (2.43 m) (191-199 ft – 58.2-60.6 m) at the end of the hole grading 0.42% Cu (Allen, 1969). Also, towards the bottom of the projected hole (Figure 8), IP chargeability appears to be increasing.

The hole encountered Eagle Granodiorite throughout, with abundant narrow intervals of pegmatite, locally with feldspar porphyry and minor mafic dike. The hole was altered to strongly altered throughout with widely spaced porphyry-style veins and stockworks. In the upper part of the hole these veins are narrow and filled with quartz-k-feldspar-sericite-pyrite with minor chalcopyrite and chlorite-pyrite-chalcopyrite veinlets. In this portion of the drill hole, down to approximately 100 m, copper values range from 2,00 to 1,000 ppm and molybdenum ranges from <5 to + 40 ppm with a single high of 100.1 ppm.

From 100 to 140 m alteration is less intense and the rock is mainly Eagle granodiorite with feldspar porphyry. Copper values are <500 ppm and Mo for the most part <30 ppm, with a few higher numbers including a high of 82.7 ppm.

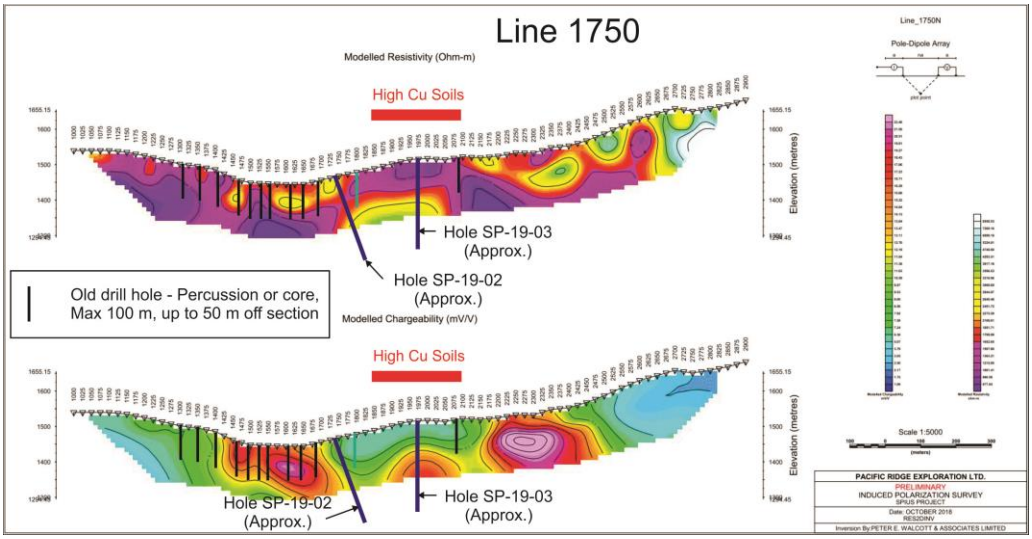

Figure 8. Target, drill holes SP-19-02 and SP-19-03.

Below 140 m, alteration and mineralization again picks up, similar to the top of the hole, with the best interval, from 140.7 to 166.0, averaging 0.055% Cu. Mineralization is dominantly in kspar-quartz-pyrite-chalcopyrite veins and chlorite-pyrite-chalcopyrite veins, although disseminated pyrite and chalcopyrite was also observed.

Hole SP-19-03

Hole SP-19-03 (Figures 12 and 14) was drilled vertically to target an area of high soil geochemistry and a dome-shaped IP chargeability anomaly on L1750 at a depth of approximately 125 m (Figure 8).

The hole collared in weakly altered and mineralized Eagle Granodiorite to 18 m and then into felsic feldspar porphyry. Mineralization in both units occurs as minor pyrite and chalcopyrite on fractures and narrow quartz veinlets. Copper values are anomalous, ranging from 200 to +900 ppm in the granodiorite and from unmineralized to 550 ppm in the feldspar porphyry. Molybdenum values are low in both units, below 10 ppm, except the interval 69 to 75 m (16.9 and 79.9 ppm Mo). From 102 to 180 m, copper values began to increase from +500 ppm to a high of 1025.2 ppm at the bottom of that interval.

From 180 to 224.25, the hole encountered a fresh and unmineralized feldspar porphyry. This appears to be a younger porphyry than that which it is cutting, showing chilled margins, and it is quite evidently post-mineral.

From 224.25 to 261, the hole went back into mineralized feldspar porphyry, and from 261 to the end of the hole at 276, into mineralized foliated Eagle Granodiorite. Alteration is moderate to locally intense with quartz-sericite and kspar-sericite-chlorite vein selvages. Chalcopyrite mineralization is consistent, close to one percent, within veins and as disseminations. This interval contained the best assays of the program, including 39 m of 0.113% Cu, from 237.0 to 276.0 m.

Hole SP-19-04

Drill hole SP-19-04 (Figures 13 and 14) was drilled to target high copper soil geochemistry in the centre of the Copper Zone, as well as a combination of lower resistivity and higher chargeability on the edge of the interpreted pyrite halo to the east (see Figure 9). Originally planned at an azimuth of 60°, it was rotated to 130° to cut the predominant vein orientation, as estimated from holes -02 and -03 and surface exposures, at closer to 90°.

To a depth of 59 m, the hole encountered oxidized Eagle Granodiorite with scattered veins with minor sulphides and magnetite. Copper values range from low to a high of 615 ppm.

From 59 to 91 m, the hole encountered feldspar porphyry with quartz and quartz and kspar veinlets, variably oxidized and locally mineralized with sulphides. Copper values in this interval range from less that 200 ppm to 702 ppm.

From 91 to the bottom of the hole at 266 m, the hole was in Eagle Granodiorite, with the exception of an eight m interval of felspar porphyry (161-169 m) and four post-ore, fine-grained mafic dikes ranging from less that one m to four m in core length.

From 91 to 107 m, the granodiorite is altered and cut by pegmatitic intrusives, with quartz-kspar+/-sulphide and quartz=chlorite-sulphide+/-magnetite veinlets. Copper values are anomalous ranging from 240 to 910 ppm.

From 107 to 170 m, including the feldspar porphyry interval, the rock is altered and variably veined, but copper and molybdenum mineralization is negligible.

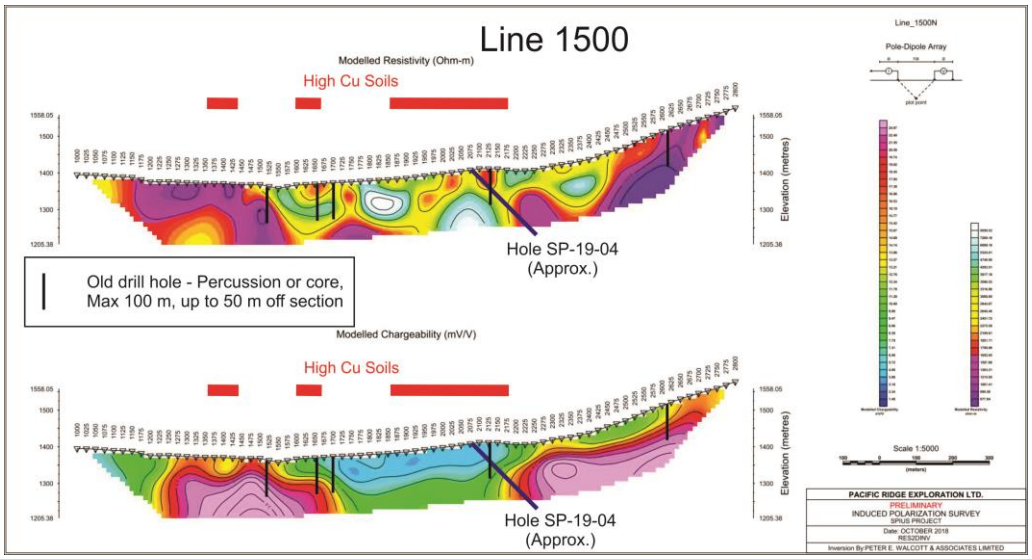

Figure 9. Target, drill hole SP-19-04.

Immediately below the feldspar porphyry dike, from 170 to the bottom of the hole, at 266, alteration and mineralization picked up significantly. Quartz-kspar-sulphide and quartz-chlorite-magnetite-sulphide veinlets become much more abundant. The interval from 179 to 263 m (84 m) averaged 0.071% Cu, while 182 to 200 m (18 m) averaged 0.112% Cu.

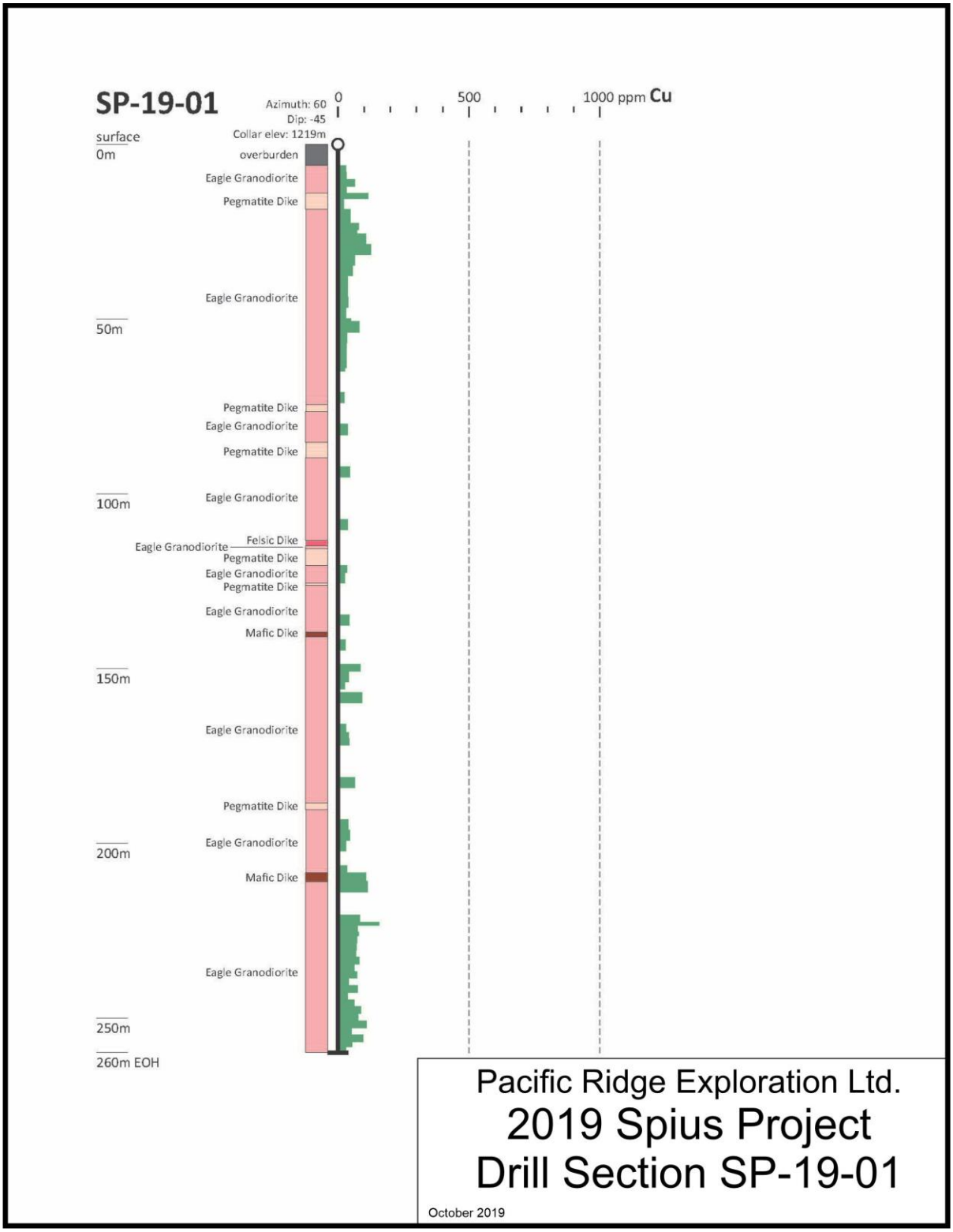

Figure 10. Drill Section SP-19-01.

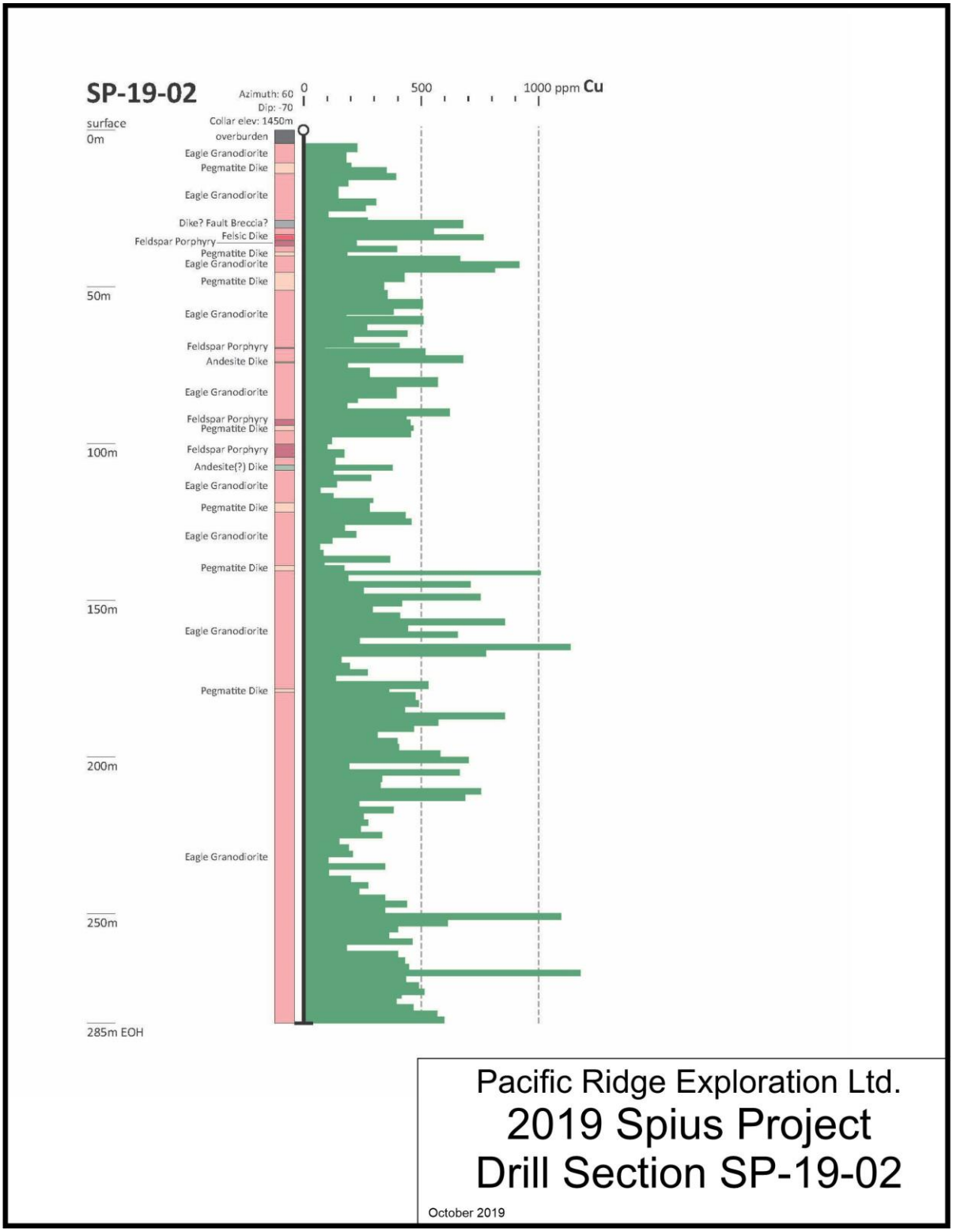

Figure 11. Drill Section SP-19-02.

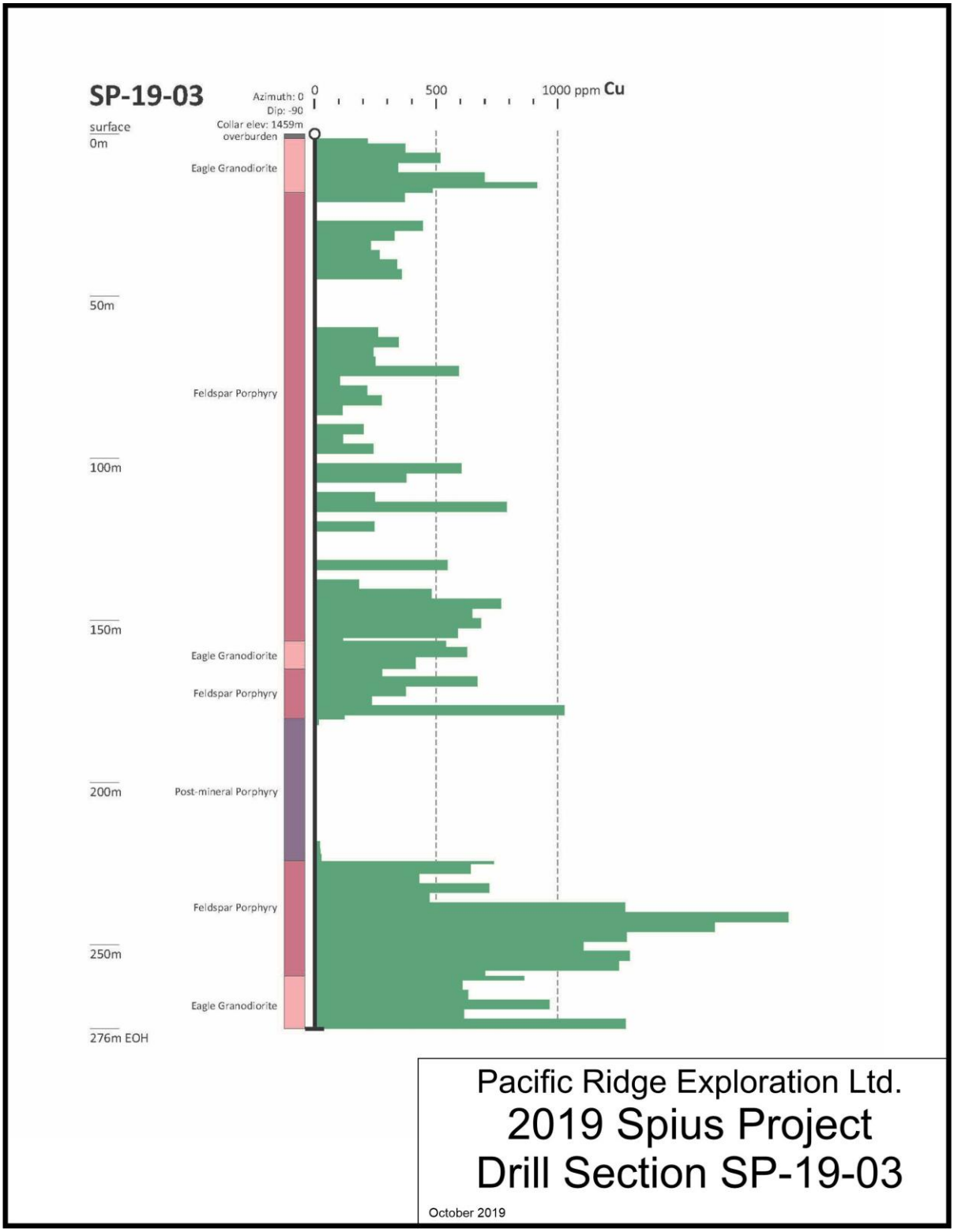

Figure 12. Drill Section SP-19-03.

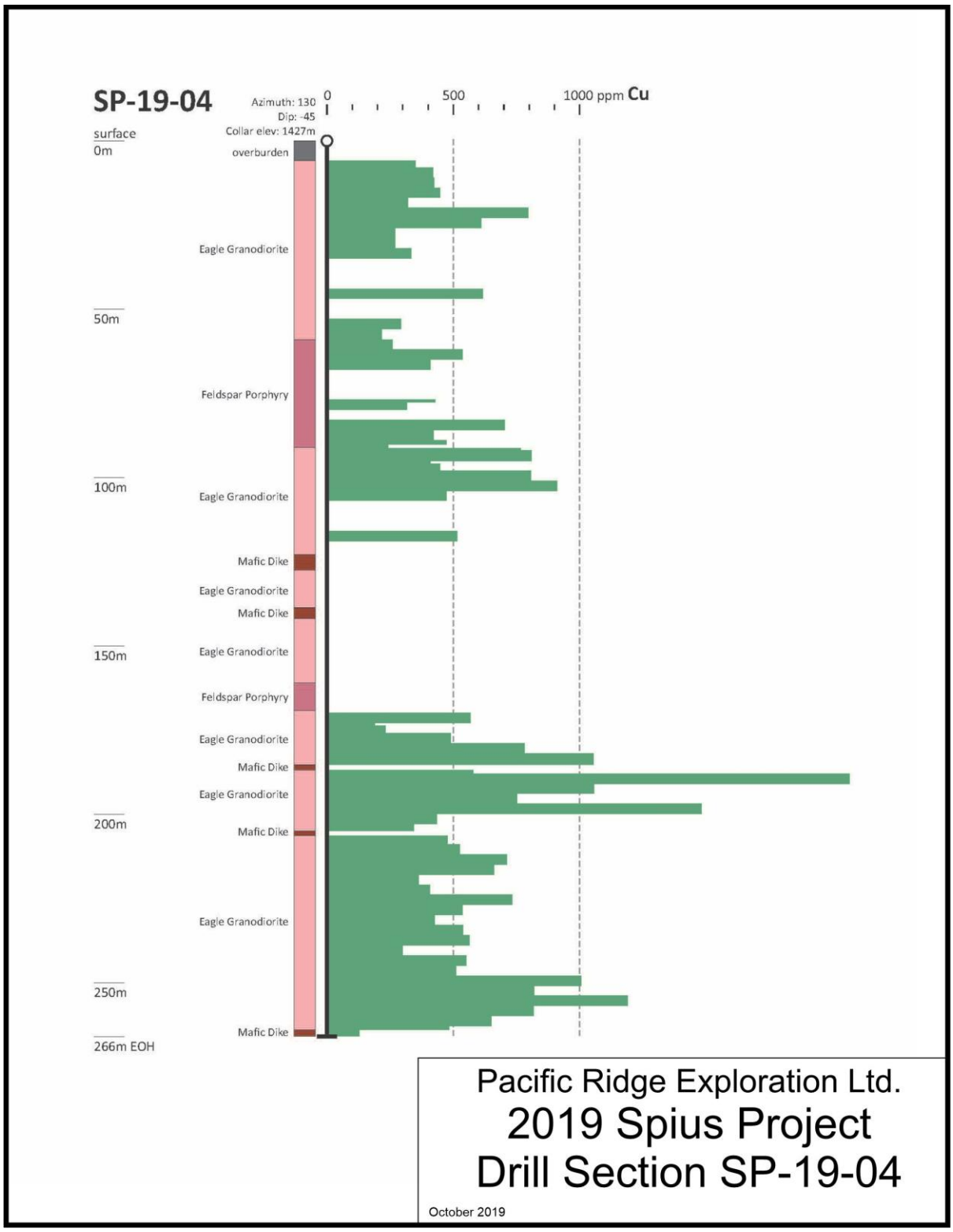

Figure 13. Drill Section SP-19-04.

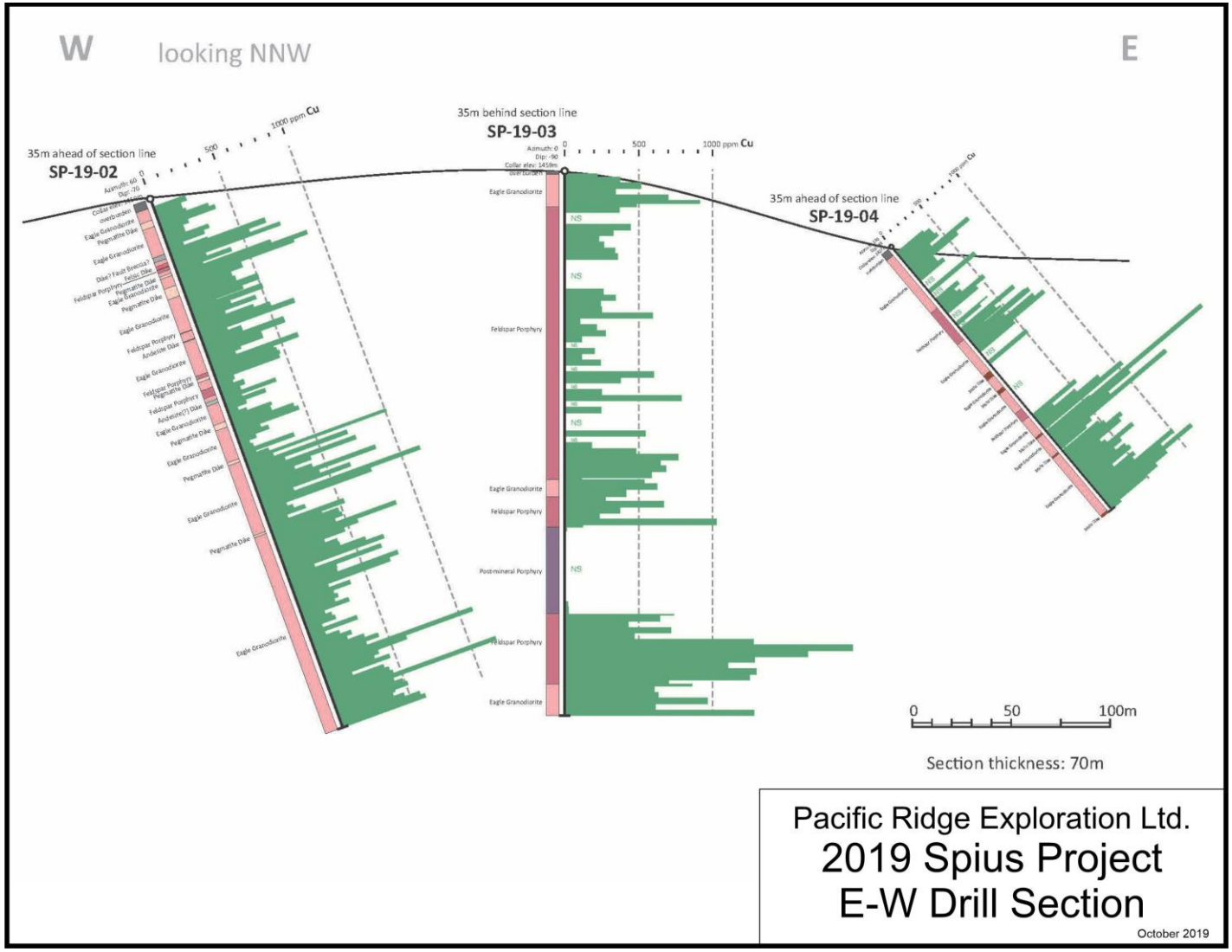

Figure 14. E-W Drill Section thru SP-19-02, -03 and -04.

Petrographic Study

The following section is extracted from a petrographic report by C. Leitch (2019), included as Appendix IV to this report.

Table 4. Samples for petrographic analysis.

Sample	Hole	Depth(m)	Field Name	Petrographic Name
SP-P-01	SP-19-02	25.5	Eagle Granodiorite	Biotite granodiorite
SP-P-02	SP-19-03	155.5	Feldspar Porphyry #1	Porphyritic biotite granodiorite
SP-P-03	SP-19-02	78.3	Eagle Granodiorite	Biotite granodiorite
SP-P-04	SP-19-02	69.0	Eagle Granodiorite	Biotite granodiorite
SP-P-05	SP-19-03	203.0	Feldspar Porphyry #2	Biotite quartz latite porphyry
SP-P-06	SP-19-02	68.0	Eagle Granodiorite	Biotite granodiorite
SP-P-07	SP-19-03	105.5	Feldspar Porphyry #1	Porphyritic biotite granodiorite
SP-P-08	SP-19-02	77.0	Eagle Granodiorite	Biotite granodiorite
SP-P-09	SP-19-03	198.0	Feldspar Porphyry #2	Biotite quartz latite porphyry
SP-P-10	SP-19-02	52.0	Eagle Granodiorite	Biotite granodiorite
SP-P-11	SP-19-02	-	Eagle Granodiorite	Biotite granodiorite

The intrusive rocks in this suite can be roughly summarized into weakly foliated biotite granodiorite (7 samples), porphyritic biotite granodiorite (2 samples) and biotite quartz latite porphyry (2 samples) as follows:

Biotite Granodiorite (Field name Foliated Granodiorite) *This is a medium-grained, weakly foliated biotite granodiorite composed of plagioclase, quartz, partly aligned biotite and minor interstitial Kspar, accessory opaques (mainly Fe-Ti oxides?) and apatite, with general weak clay?/sericite after plagioclase and chlorite-trace rutile after biotite (more significant alteration detailed below). Some samples contain an unidentified relict mafic mineral mostly pseudomorphed by very fine-grained clay?/chlorite-sericite-opaques.*

Porphyritic Biotite Granodiorite (Field name Feldspar Porphyry 1) *This is a plagioclase, relict mafic (chlorite-trace rutile altered biotite) phenocrysts in fine-grained groundmass of Kspar-plagioclase-quartz-sericite (after biotite?)-accessory opaques (mostly Fe-Ti oxides, minor pyrite?), apatite. Possible groundmass "K-flooding" (fine-grained Kspar-quartz attacking margins of plagioclase crystals), weak clay?/sericite-chlorite.*

Biotite Quartz Latite Porphyry (Field name Feldspar Porphyry 2) *This is a sparse plagioclase and biotite phenocrysts in very fine-grained groundmass of Kspar-quartz-plagioclase-sericite (after biotite?) with accessory opaques (Fe-Ti oxides?), apatite, affected by strong carbonate-minor albite?-clay?/sericite-muscovite-trace pyrite?-chlorite-rutile alteration.*

Alteration is generally strongest in the weakly foliated granodiorite, typically controlled in and along envelopes containing variable Kspar-quartz-sericite/muscovite-carbonate-albite-chlorite, developed around thin, diffuse, poorly defined veins/veinlets of quartz-Kspar ±sulfides (mainly pyrite, minor chalcopyrite?)-carbonate. Kspar, local albite, and sericite generally replace plagioclase, and muscovite, chlorite, carbonate and sulfides replace former mafics (mainly biotite, some of which may have replaced former hornblende?). Thus, the alteration is typically classified as relatively weak potassic (Kspar-quartz-albite), in places overprinted by phyllic (quartz-sericite/muscovite-carbonate) grading to propylitic (clay?/sericite-chlorite) in less altered wall rock farther from veins/veinlets. In the porphyritic granodiorite, alteration is weaker (possible pervasive groundmass K-flooding, with local potassic alteration along thin veinlets in one of the two samples). In the quartz latite porphyry, moderate to strong pervasive carbonate-sericite-albite?-trace chlorite alteration is accompanied only by rare thin carbonate veinlets, suggestive of mainly phyllic alteration. Identification and quantification of possible sulfide minerals is precluded by lack of polished surfaces.

Discussion

The 2019 drill program confirmed the presence of a porphyry style mineralized system associated with a porphyritic biotite granodiorite in the upper or northern part of the Copper Zone. Mineralization occurs mainly within the foliated biotite granodiorite, but both mineralization and alteration are spatially associated with the porphyritic granodiorite, which appears to be syn-mineralization and likely the causative intrusion. The biotite latite porphyry occurs within the porphyritic granodiorite, appears to be co-magmatic, but it is unmineralized and therefore post-mineral.

The drill program encountered several intersections of sub-ore grade mineralization in holes SP-19-02, 03 and 04 (Table 3), while hole SP-19-01, drilled in the lower or southern portion of the system, encountered only weak mineralization and alteration. This suggests that the potential for higher grade mineralization lies at depth and to the north, associated with the porphyritic granodiorite. The 2019 drilling appears to have tested only the southern fringe of this intrusion, although its full extent is unknown due to its lack of exposure. The drilling failed to encounter a lithology or mineralization similar to the high grade (2.56% Cu) felsic intrusive float that was discovered in 2016, approximately 150 m north of hole SP-19-02 and 150 m west of SP-19-03, slightly upslope from both holes.

CONCLUSIONS

The Property is road accessible, located in the Nicola and New Westminster Mining Divisions, British Columbia, 40 km southwest of Merritt and 10 km east-northeast of Boston Bar. The Property is in the Spius Creek watershed centered at approximately 49°55’05” N and 121°16’01” W, on NTS map sheet 92H/14 and is known in MINFILE as “Gossan” (No. 092HNW027). The Property comprises seven mineral claims covering 2,205.5 hectares.

The Property lies within the Eagle Plutonic Complex. Rocks within the Property are mainly biotite-hornblende granodiorite, with younger feldspar porphyry and quartz-feldspar porphyry intruded by felsic and lamprophyre dikes. The Copper Zone, in the central part of the Property, is defined by a strong copper B horizon soil geochemical anomaly, with associated anomalous molybdenum, with a surrounding pyritic

alteration zone. Although the Copper Zone is mainly till and colluvium covered, mineralization has been observed mainly in float and occasionally in outcrop and includes secondary copper minerals, including malachite and azurite, locally chalcopyrite in stockwork veins and disseminations and minor molybdenite.

Exploration dates to the 1960's and early 1970's, when work included geological mapping, soil sampling, IP and EM geophysical surveys, road building, trenching and drilling (10 percussion drill holes and 12 diamond drill holes), all less than 100 m depth. Unfortunately, the data from most of this work was not recorded in assessment reports and has now been lost.

No further work was done until a 2012 soil survey defined a strong copper soil anomaly that extended the Copper Zone to the southeast. The current owners further defined the Copper Zone as a significant porphyry copper target with additional prospecting and sampling and discovered a piece of float with porphyry-style disseminated pyrite-chalcopyrite mineralization that ran 2.56% Cu.

Pacific Ridge optioned the Property and in October 2018 and completed a program of B horizon soil sampling and an IP geophysical survey. The soil survey confirmed and better defined the Copper Zone anomaly as outlined by earlier workers, with anomalous to strongly anomalous Cu values ranging from 192 ppm to 4,340 ppm Cu. Anomalous molybdenum values ranging from 9 ppm to 108 ppm Mo are both within and peripheral to the main Cu anomaly. Anomalous silver values occur mainly within the Copper Zone anomaly, but there are also isolated anomalous values outside the Copper Zone. The IP survey shows a horseshoe-shaped chargeability anomaly that surrounds and partially overlaps the Copper Zone anomaly. This is interpreted to reflect the presence of an annular shell of disseminated sulphide mineralization, grading outwards from an inner pyrite-chalcopyrite zone to an outer pyrite shell. Peripheral zones of lower resistivity may reflect zones of more intense pyrite mineralization. A central zone of higher chargeability appears at depth near the centre of L1750. This is near the occurrence of high grade disseminated copper float found in 2016 as well as near the shallow drill hole that intersected good mineralization in the bottom 60 ft (61 m), with the last 8 ft (2.43 m) (191-199 ft – 58.2-60.6 m) ending in 0.42% Cu (Allen, 1969).

In 2019, Pacific Ridge completed a four-hole, 1,087 m diamond drilling program to test the Copper Zone. Holes were targeted to test the strongest soil geochemical values, guided by the 2018 IP survey results. All holes intersected porphyry style alteration and mineralization. The best mineralization was encountered at the bottom of hole SP-19-03, drilled at the northern end of the Copper Zone, encountering 51.8 m averaging .099% Cu (224.3 to 273 m), including 39.0 m at .113% Cu. (237-276 m) Hole SP-19-04. located 200 m south of hole 3, encountered 81.0 of 0.071% Cu, (179 to 263 m) including 19.4 m at 0.116% Cu (182-200 m), also at the bottom of the hole. Hole SP-19-02, drilled 700 m southwest of hole 3, encountered 25.4 m at 0.0554% Cu and 0.0038% Mo (140.7 to 166 m) and 20.0 m at 0.557% Cu and 0.0018% Mo (250 to 270 m). All drill holes encountered porphyry-style mineralization and alteration top to bottom, with variably anomalous Cu and Mo values and locally anomalous Ag throughout.

The drill program encountered several intersections of sub-ore grade mineralization in holes SP-19-02, 03 and 04, while hole SP-19-01, drilled in the lower or southern portion of the system, encountered only weak mineralization and alteration. This suggests that the potential for higher grade mineralization lies at depth and to the north, associated with the porphyritic granodiorite. The 2019 drilling appears to have tested only the southern fringe of this intrusion, although its full extent is unknown due to its lack of exposure. The drilling failed to encounter a lithology or mineralization similar to the high grade (2.56%

Cu) felsic intrusive float that was discovered in 2016, approximately 150 m north of hole SP-19-02 and 150 m west of SP-19-03, slightly upslope from both holes.

RECOMMENDATIONS

A program of trenching in the vicinity of the high-grade copper float discovery from 2016, on the upper exploration trail just upslope from drill holes SP-19-02 and -03 should be carried out prior to planning a further drill test of the Copper Zone.

STATEMENT OF EXPENDITURES

Table 5. 2019 Spius project expenditures.

Field Work	Description	Dates	Days	Rate	Amount
Bruce Bried	Project planning, site prep.	Mar 21-Jun 9, 2019	16		$11,160.50
GF Contracting (Back-hoe)	Road and trail, reclamation	May 14-June 21, 2019	16		$19,477.00
Fusion Timber (2 workers)	Road and trail brushing	May 14-26, 2019	12		$4,116.00
Paycore Enterprises	Drilling - 4 holes, 1097 m	June 3-19, 2019	16		$102,669.00
Gerald G. Carlson	Project Supervision	May 31-Jun 24, 2019	19	$800.00	$15,200.00
Steven Kramar	Geologist	June 1-30, 2019	30		$7,500.00
Fraser Valley Adventures	Cabin Rental	June 1-30, 2019	30		$6,000.00
Ridgeline Exploration Services	Field Work	September 26, 2019	1		$1,592.33
MSA Labs	Analytical - 368 core samples				$14,002.00
Vancouver Petrographics	Petrographic study				$2,951.03
Field Expenses	Detailed in Appendix VI				$15,988.56
Office Work					
Gerald G. Carlson	Project Planning		4	$800.00	$3,200.00
Gerald G. Carlson	Report Preparation		5	$800.00	$4,000.00
		Total			**$207,856.42**

Invoices for work performed are shown in Appendix V. Details of Field Expenses are shown in in Appendix VI.

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CERTIFICATE OF QUALIFICATIONS

I, Gerald G. Carlson, hereby certify that:

1. I am a consulting mineral exploration geologist and President and CEO of Pacific Ridge Exploration Ltd., 11th Floor – 1111 Melville St., Vancouver, B.C. V6E 3V6.

2. I am a graduate of the University of Toronto, with a degree in Geological Engineering (B.A.Sc., 1969). I have advanced degrees in Economic Geology from Michigan Technological University (M.Sc., 1974) and Dartmouth College (Ph.D., 1978). I have been involved in geological mapping, mineral exploration and the management of mineral exploration companies continuously since 1969, except between 1972 and 1978 when I was in graduate studies.

3. I am a member in good standing of Engineers and Geoscientists British Columbia, Registration No. 12513 and of Engineers Yukon, Registration No. 0198.

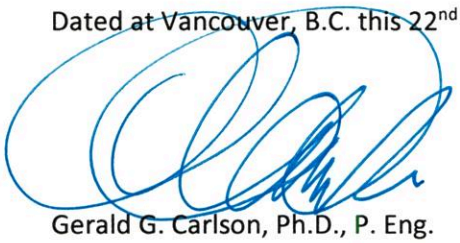
4. I am the author of this assessment report on the Spius property.

5. The report is based on a literature review, on private company reports and on the 2019 drill program.

6. I am a Director and Officer of Pacific Ridge Exploration Ltd. and I own shares in the company.

7. I was personally involved in the planning, execution and interpretation of the exploration program discussed in this report.

Dated at Vancouver, B.C. this 22nd day of October 2019,



Gerald G. Carlson, Ph.D., P. Eng.

Appendix I
Summary Drill Logs

Hole SP-19-01 - Summary Log

From	To	Number		Cu(ppm)	Mo(ppm)
0	6	N/A	Overburden		
7	9	14251	Eagle Granodiorite	27.8	1.71
9	11	14574	Eagle Granodiorite	31.4	3.39
11	13	14575	Eagle Granodiorite	62.6	3.96
13	14.9	14576	Eagle Granodiorite	30.3	1.82
14.9	16.5	14252	Pegmatite Dyke	113.8	4.53
16.15	19.15	14577	Pegmatite Dyke	20.5	2.12
19.15	22	14253	Eagle Granodiorite	44.6	2.19
22	23	14578	Eagle Granodiorite	44.9	1.66
23	25	14579	Eagle Granodiorite	77.9	3.05
25	26	14580	Eagle Granodiorite	71.5	5.08
26	29	14581	Eagle Granodiorite	104.1	24.64
29	32	14582	Eagle Granodiorite	123.5	1.86
32	35	14583	Eagle Granodiorite	61.5	1.81
35	38	14584	Eagle Granodiorite	53.2	10.87
38	41	14586	Eagle Granodiorite	34.1	1.76
41	44	14587	Eagle Granodiorite	34.0	1.64
44	47	14588	Eagle Granodiorite	36.4	1.47
47	50	14589	Eagle Granodiorite	28.6	3.74
50	50.9	14590	Eagle Granodiorite	47.5	7.29
50.9	54	14254	Eagle Granodiorite	80.2	31.60
54	57	14591	Eagle Granodiorite	32.6	1.56
57	60	14592	Eagle Granodiorite	31.5	1.79
60	64	14593	Eagle Granodiorite	30.9	1.75
64	65	14594	Eagle Granodiorite	25.2	1.45
65	71		Eagle Granodiorite		
71	74	14595	Eagle Granodiorite	21.4	1.55
74	74.5		Eagle Granodiorite		
74.5	76.4		Pegmatite Dyke		
76.4	80		Eagle Granodiorite		
80	83	14596	Eagle Granodiorite	34.6	1.40
83	85.1		Eagle Granodiorite		
85.1	89.5		Pegmatite Dyke		
89.5	92		Eagle Granodiorite		
92	95	14597	Eagle Granodiorite	44.0	1.39
95	107		Eagle Granodiorite		
107	110	14598	Eagle Granodiorite	35.6	1.88
110	113		Eagle Granodiorite		
113	114.5		Felsic Dyke		

Hole SP-19-01 - Summary Log

From	To	Number		Cu(ppm)	Mo(ppm)
114.5	115.3		Eagle Granodiorite		
115.3	119.95		Pegmatite Dyke		
119.95	122	14599	Eagle Granodiorite	32.7	0.35
122	125	14601	Eagle Granodiorite	24.5	0.50
125	125.7		Pegmatite Dyke		
125.7	134		Eagle Granodiorite		
134	137	14602	Eagle Granodiorite	40.4	0.95
137	138.9		Eagle Granodiorite		
138.9	140.2		Mafic Dyke		
140.2	143		Eagle Granodiorite		
143	146	14603	Eagle Granodiorite	26.7	1.69
146	150		Eagle Granodiorite		
150	152	14605	Eagle Granodiorite	84.0	1.83
152	155	14604	Eagle Granodiorite	38.8	2.26
155	157.1	14606	Eagle Granodiorite	23.4	0.85
157.1	158		Eagle Granodiorite		
158	161	14607	Eagle Granodiorite	90.3	1.34
161	167		Eagle Granodiorite		
167	169.3	14608	Eagle Granodiorite	28.9	0.47
169.3	171	14609	Eagle Granodiorite	39.7	7.22
171	173	14610	Eagle Granodiorite	40.6	0.81
173	182		Eagle Granodiorite		
182	185	14611	Eagle Granodiorite	63.1	1.66
185	189.3		Eagle Granodiorite		
189.3	191.1		Pegmatite Dyke		
191.1	194		Eagle Granodiorite		
194	197	14612	Eagle Granodiorite	37.3	1.03
197	200	14613	Eagle Granodiorite	43.0	0.68
200	203	14614	Eagle Granodiorite	28.2	4.69
203	207		Eagle Granodiorite		
207	209	14277	Eagle Granodiorite	32.6	11.05
209	211.5	14278	Mafic Dyke	105.3	1.44
211.5	214.6	14279	Eagle Granodiorite	110.8	2.16
214.6	221		Eagle Granodiorite		
221	223	14255	Eagle Granodiorite	82.3	1.84
223	224	14256	Eagle Granodiorite	156.2	1.81
224	225.9	14257	Eagle Granodiorite	72.6	271.81
225.9	227	14258	Eagle Granodiorite	77.2	15.86
227	229	14259	Eagle Granodiorite	70.3	3.20

Hole SP-19-01 - Summary Log

From	To	Number		Cu(ppm)	Mo(ppm)
229	231	14260	Eagle Granodiorite	68.6	8.96
231	233	14262	Eagle Granodiorite	65.7	4.70
233	235	14263	Eagle Granodiorite	80.3	3.70
235	237	14264	Eagle Granodiorite	60.7	2.19
237	239	14265	Eagle Granodiorite	70.7	4.01
239	241	14266	Eagle Granodiorite	39.2	1.91
241	243	14267	Eagle Granodiorite	72.2	2.00
243	245	14268	Eagle Granodiorite	34.0	1.77
245	247	14269	Eagle Granodiorite	60.2	4.23
247	249	14270	Eagle Granodiorite	85.9	1.49
249	251	14272	Eagle Granodiorite	75.4	1.52
251	253	14273	Eagle Granodiorite	107.1	4.93
253	255	14274	Eagle Granodiorite	48.8	4.11
255	257	14275	Eagle Granodiorite	94.0	1.73
257	258.4	14276	Eagle Granodiorite	51.8	17.27
258.4	260	14280	Eagle Granodiorite	28.6	1.50

Hole SP-19-02 - Summary Log

From	To	Number		Cu(ppm)	Mo(ppm)
0	1.5	N/A	Overburden		
1.5	3.7		Eagle Granodiorite		
3.7	4.35		Pegmatite Dyke		
4.35	7	14282	Eagle Granodiorite	226.5	5.35
7	10.5	14283	Eagle Granodiorite	181.6	3.35
10.5	12	14284	Pegmatite Dyke	201.1	11.75
12	13.85	14285	Pegmatite Dyke	353.3	18.37
13.85	16	14286	Eagle Granodiorite	391.8	4.09
16	18	14287	Eagle Granodiorite	188.7	4.58
18	22	14288	Eagle Granodiorite	146.1	2.85
22	24	14289	Eagle Granodiorite	307.0	1.70
24	26	14290	Eagle Granodiorite	264.5	4.80
26	28	14292	Eagle Granodiorite	105.4	10.97
28	28.75	14293	Eagle Granodiorite	271.8	3.01
28.75	31.3	14294	Dyke? Fault Breccia?	679.0	7.33
31.3	34.34	14295	Eagle Granodiorite	554.2	2.58
34.34	35.1	14296	Felsic Dyke	765.9	3.73
35.1	35.4	14297	Eagle Granodiorite	224.2	2.42
35.4	37	14298	Felsic Feldspar Porphyry	224.8	8.02
37	38.95	14299	Eagle Granodiorite	396.2	11.09
38.95	40.2	14300	Pegmatite Dyke	185.3	8.72
40.2	42	14302	Eagle Granodiorite	665.4	4.37
42	44	14303	Eagle Granodiorite	917.2	10.96
44	45.5	14304	Eagle Granodiorite	812.6	5.20
45.5	48.5	14305	Pegmatite Dyke	428.2	27.05
48.5	51.2	14306	Pegmatite Dyke	341.0	4.86
51.2	54	14307	Eagle Granodiorite	356.7	19.95
54	57	14308	Eagle Granodiorite	506.0	6.34
57	58.9	14309	Eagle Granodiorite	382.3	5.85
58.9	59.5	14310	Felsic Dyke	181.3	2.48
59.5	62	14312	Eagle Granodiorite	509.6	16.84
62	64	14313	Eagle Granodiorite	270.1	7.59
64	66	14314	Eagle Granodiorite	441.8	19.00
66	68	14315	Eagle Granodiorite	211.6	19.77
68	69.4	14316	Eagle Granodiorite	406.8	14.29
69.4	69.67	14317	Felsic Quartz Porphyry	90.9	5.96
69.67	72	14318	Eagle Granodiorite	517.6	43.22
72	73.7	14319	Eagle Granodiorite	677.6	31.66
73.7	74.35	14320	Andesite (?) Dyke	678.3	3.44

Hole SP-19-02 - Summary Log

From	To	Number		Cu(ppm)	Mo(ppm)
74.35	76	14322	Eagle Granodiorite	188.1	3.16
76	79	14323	Eagle Granodiorite	280.8	11.32
79	82	14324	Eagle Granodiorite	569.7	15.05
82	85.65	14325	Eagle Granodiorite	395.0	9.83
85.65	87	14326	Eagle Granodiorite	229.6	7.72
87	89	14327	Eagle Granodiorite	185.2	7.21
89	91.3	14328	Eagle Granodiorite	621.6	100.10
91.3	92.45	14329	Eagle Granodiorite	438.4	28.33
92.45	94.3	14330	Felsic Feldspar Porphyry	453.9	20.27
94.3	96	14331	Pegmatite Dyke	466.8	21.13
96	98	14332	Eagle Granodiorite	455.9	29.49
98	100.3	14333	Eagle Granodiorite	119.5	7.76
100.3	102	14334	Felsic Feldspar Porphyry	100.8	5.44
102	104.5	14335	Felsic Feldspar Porphyry	173.2	9.16
104.5	106.85	14337	Eagle Granodiorite	133.5	3.62
106.85	108.66	14338	Andesite (?) Dyke	377.9	7.96
108.66	110	14339	Eagle Granodiorite	127.3	20.47
110	112	14340	Eagle Granodiorite	287.2	7.24
112	114	14341	Eagle Granodiorite	140.3	9.94
114	116	14342	Eagle Granodiorite	71.3	7.91
116	117.5	14343	Eagle Granodiorite	124.9	4.78
117.5	118.95	14344	Eagle Granodiorite	295.7	46.78
118.95	121.9	14345	Pegmatite Dyke	281.3	32.65
121.9	124	14346	Eagle Granodiorite	433.4	18.20
124	126	14347	Eagle Granodiorite	457.7	82.73
126	128	14348	Eagle Granodiorite	173.5	10.36
128	130	14349	Eagle Granodiorite	222.8	20.16
130	132	14350	Eagle Granodiorite	122.2	7.61
132	134	14352	Eagle Granodiorite	69.3	6.71
134	136	14353	Eagle Granodiorite	84.0	9.92
136	138	14354	Eagle Granodiorite	367.0	40.50
138	139	14355	Eagle Granodiorite	87.6	2.43
139	140.65	14356	Pegmatite Dyke	171.9	22.00
140.65	142	14357	Eagle Granodiorite	1007.7	84.04
142	144	14358	Eagle Granodiorite	188.7	29.80
144	146	14359	Eagle Granodiorite	710.3	87.63
146	148	14360	Eagle Granodiorite	253.6	5.27
148	150	14361	Eagle Granodiorite	751.6	22.53
150	152	14362	Eagle Granodiorite	419.2	15.97

Hole SP-19-02 - Summary Log

From	To	Number		Cu(ppm)	Mo(ppm)
152	154	14363	Eagle Granodiorite	293.4	29.82
154	156	14364	Eagle Granodiorite	410.1	44.61
156	158	14366	Eagle Granodiorite	854.6	75.92
158	160	14367	Eagle Granodiorite	443.1	16.50
160	162	14368	Eagle Granodiorite	654.5	25.55
162	164	14369	Eagle Granodiorite	238.4	60.34
164	166	14370	Eagle Granodiorite	1134.9	12.69
166	168	14372	Eagle Granodiorite	775.2	4.59
168	170	14373	Eagle Granodiorite	159.2	8.28
170	172.1	14374	Eagle Granodiorite	196.0	6.30
172.1	174	14375	Eagle Granodiorite	272.1	2.39
174	176	14376	Eagle Granodiorite	136.6	3.44
176	178.3	14377	Eagle Granodiorite	531.1	13.14
178.3	179.5	14378	Pegmatite Dyke	363.1	12.12
179.5	182	14379	Eagle Granodiorite	476.4	24.56
182	184	14380	Eagle Granodiorite	489.0	5.86
184	186	14382	Eagle Granodiorite	430.6	7.59
186	188	14383	Eagle Granodiorite	856.6	21.04
188	190	14384	Eagle Granodiorite	572.1	3.96
190	192	14385	Eagle Granodiorite	467.5	5.19
192	194	14386	Eagle Granodiorite	313.8	3.58
194	196	14387	Eagle Granodiorite	398.3	4.80
196	198	14388	Eagle Granodiorite	405.0	10.85
198	200	14389	Eagle Granodiorite	579.6	37.86
200	202	14390	Eagle Granodiorite	701.1	53.85
202	204	14392	Eagle Granodiorite	194.2	7.72
204	206	14393	Eagle Granodiorite	664.4	5.34
206	208	14394	Eagle Granodiorite	333.9	11.74
208	210	14395	Eagle Granodiorite	326.9	14.28
210	212	14396	Eagle Granodiorite	754.1	2.83
212	214	14397	Eagle Granodiorite	686.7	8.55
214	216	14398	Eagle Granodiorite	235.7	11.66
216	218	14399	Eagle Granodiorite	382.8	11.19
218	220	14400	Eagle Granodiorite	255.3	19.86
220	222	14402	Eagle Granodiorite	273.6	8.39
222	224	14403	Eagle Granodiorite	242.9	5.00
224	226	14404	Eagle Granodiorite	334.0	10.15
226	228	14405	Eagle Granodiorite	151.1	10.68
228	230	14406	Eagle Granodiorite	191.8	21.33

Hole SP-19-02 - Summary Log

From	To	Number		Cu(ppm)	Mo(ppm)
230	232	14407	Eagle Granodiorite	207.6	29.03
232	234	14408	Eagle Granodiorite	104.2	16.49
234	236	14409	Eagle Granodiorite	345.4	17.48
236	238	14410	Eagle Granodiorite	107.4	3.50
238	240	14412	Eagle Granodiorite	198.8	4.13
240	242	14413	Eagle Granodiorite	274.0	30.27
242	244	14414	Eagle Granodiorite	234.6	46.63
244	246	14415	Eagle Granodiorite	346.7	7.44
246	248	14416	Eagle Granodiorite	440.1	15.66
248	250	14417	Eagle Granodiorite	344.8	20.14
250	252	14418	Eagle Granodiorite	1094.5	79.35
252	254	14419	Eagle Granodiorite	612.2	17.76
254	256	14420	Eagle Granodiorite	399.6	2.95
256	258	14422	Eagle Granodiorite	362.2	5.05
258	260	14423	Eagle Granodiorite	463.2	31.05
260	262	14424	Eagle Granodiorite	183.8	2.59
262	264	14425	Eagle Granodiorite	402.1	13.83
264	266.15	14426	Eagle Granodiorite	429.9	4.31
266.15	268	14427	Eagle Granodiorite	446.6	4.39
268	270	14428	Eagle Granodiorite	1177.0	21.36
270	272	14429	Eagle Granodiorite	434.0	3.69
272	274	14430	Eagle Granodiorite	489.6	2.59
274	276	14432	Eagle Granodiorite	513.9	5.78
276	277.05	14433	Eagle Granodiorite	416.3	2.23
277.05	279	14434	Eagle Granodiorite	394.6	12.42
279	281	14435	Eagle Granodiorite	466.3	3.63
281	283	14436	Eagle Granodiorite	569.0	2.95
283	285	14437	Eagle Granodiorite	598.0	2.54

Drill Hole SP-19-03 - Summary Log

From	To	Number		Cu(ppm)	Mo(ppm)
0	1.5	N/A	Overburden		
1.5	3	14438	Eagle Granodiorite	218.4	1.68
3	6	14439	Eagle Granodiorite	372.6	2.39
6	9	14440	Eagle Granodiorite	516.5	3.50
9	12	14442	Eagle Granodiorite	342.1	10.55
12	15	14443	Eagle Granodiorite	698.9	5.96
15	16.7	14444	Eagle Granodiorite	913.7	3.12
16.7	18.25	14445	Eagle Granodiorite	484.5	3.03
18.25	21	14446	Felsic Feldspar Porphyry	369.0	5.60
21	24		Felsic Feldspar Porphyry		
24	27		Felsic Feldspar Porphyry		
27	30	14447	Felsic Feldspar Porphyry	444.9	1.81
30	33	14448	Felsic Feldspar Porphyry	327.0	1.87
33	36	14449	Felsic Feldspar Porphyry	229.9	1.20
36	39	14450	Felsic Feldspar Porphyry	266.6	1.35
39	42	14452	Felsic Feldspar Porphyry	337.9	2.31
42	45	14453	Felsic Feldspar Porphyry	357.1	3.90
45	48		Felsic Feldspar Porphyry		
48	51		Felsic Feldspar Porphyry		
51	54		Felsic Feldspar Porphyry		
54	57		Felsic Feldspar Porphyry		
57	60		Felsic Feldspar Porphyry		
60	63	14616	Felsic Feldspar Porphyry	160.4	3.87
63	66	14619	Felsic Feldspar Porphyry	344.1	12.18
66	69	14618	Felsic Feldspar Porphyry	240.7	1.97
69	72	14617	Felsic Feldspar Porphyry	250.2	16.89
72	75	14454	Felsic Feldspar Porphyry	592.3	79.95
75	78	14455	Felsic Feldspar Porphyry	104.0	4.14
78	81	14620	Felsic Feldspar Porphyry	214.7	10.25
81	84	14456	Felsic Feldspar Porphyry	274.9	11.70
84	87	14621	Felsic Feldspar Porphyry	113.4	2.31
87	90		Felsic Feldspar Porphyry		
90	93	14457	Felsic Feldspar Porphyry	201.6	1.76
93	96	14458	Felsic Feldspar Porphyry	116.9	1.78
96	99	14622	Felsic Feldspar Porphyry	241.9	1.14
99	102		Felsic Feldspar Porphyry		
102	105	14459	Felsic Feldspar Porphyry	602.5	1.48
105	108	14460	Felsic Feldspar Porphyry	375.4	2.11
108	111		Felsic Feldspar Porphyry		

Drill Hole SP-19-03 - Summary Log

From	To	Number		Cu(ppm)	Mo(ppm)
111	114	14623	Felsic Feldspar Porphyry	248.3	0.59
114	117	14462	Felsic Feldspar Porphyry	789.4	1.49
117	120		Felsic Feldspar Porphyry		
120	123	14624	Felsic Feldspar Porphyry	245.6	1.46
123	126		Felsic Feldspar Porphyry		
126	129		Felsic Feldspar Porphyry		
129	132		Felsic Feldspar Porphyry		
132	135	14463	Felsic Feldspar Porphyry	545.0	1.36
135	138		Felsic Feldspar Porphyry		
138	141	14464	Felsic Feldspar Porphyry	182.4	1.15
141	144	14465	Felsic Feldspar Porphyry	480.1	0.93
144	147	14466	Felsic Feldspar Porphyry	766.4	1.08
147	150	14467	Felsic Feldspar Porphyry	646.4	8.81
150	153	14468	Felsic Feldspar Porphyry	682.3	1.39
153	156	14469	Felsic Feldspar Porphyry	587.9	7.19
156	156.97	14470	Felsic Feldspar Porphyry	116.7	0.80
156.97	159	14472	Eagle Granodiorite	538.9	22.51
159	162	14626	Eagle Granodiorite	625.6	1.94
162	165.55	14627	Eagle Granodiorite	415.1	7.89
165.55	168	14473	Felsic Feldspar Porphyry	276.0	1.90
168	171	14474	Felsic Feldspar Porphyry	668.1	3.68
171	174	14475	Felsic Feldspar Porphyry	373.6	0.73
174	177	14476	Felsic Feldspar Porphyry	234.1	3.22
177	180	14477	Felsic Feldspar Porphyry	1025.2	1.36
180	181.16	14478	Felsic Feldspar Porphyry	123.0	0.63
181.16	183	14479	Felsic Feldspar Porphyry	15.7	0.50
183	186		Felsic Feldspar Porphyry		
186	189		Felsic Feldspar Porphyry		
189	192		Felsic Feldspar Porphyry		
192	195		Felsic Feldspar Porphyry		
195	198		Felsic Feldspar Porphyry		
198	201		Felsic Feldspar Porphyry		
201	204		Felsic Feldspar Porphyry		
204	207		Felsic Feldspar Porphyry		
207	210		Felsic Feldspar Porphyry		
210	213		Felsic Feldspar Porphyry		
213	216		Felsic Feldspar Porphyry		
216	218		Felsic Feldspar Porphyry		
218	220.4	14480	Felsic Feldspar Porphyry	20.8	0.83

Drill Hole SP-19-03 - Summary Log

From	To	Number		Cu(ppm)	Mo(ppm)
220.4	222	14482	Felsic Feldspar Porphyry	23.7	0.93
222	224.25	14483	Felsic Feldspar Porphyry	26.8	1.23
224.25	225	14484	Felsic Feldspar Porphyry	736.0	1.89
225	228	14485	Felsic Feldspar Porphyry	640.7	2.72
228	231	14486	Felsic Feldspar Porphyry	428.8	4.37
231	234	14487	Felsic Feldspar Porphyry	717.4	2.81
234	237	14558	Felsic Feldspar Porphyry	472.2	2.86
237	240	14559	Felsic Feldspar Porphyry	1275.4	3.01
240	243	14560	Felsic Feldspar Porphyry	1946.0	2.59
243	246	14561	Felsic Feldspar Porphyry	1642.8	5.00
246	249	14562	Felsic Feldspar Porphyry	1282.0	3.22
249	252	14563	Felsic Feldspar Porphyry	1103.4	3.92
252	255	14564	Felsic Feldspar Porphyry	1294.3	3.58
255	258	14565	Felsic Feldspar Porphyry	1249.6	7.74
258	259.75	14566	Felsic Feldspar Porphyry	701.0	13.44
259.75	261	14567	Eagle Granodiorite	860.5	3.36
261	264	14568	Eagle Granodiorite	606.8	2.75
264	267	14569	Eagle Granodiorite	631.3	2.88
267	270	14571	Eagle Granodiorite	964.5	3.38
270	273	14572	Eagle Granodiorite	612.6	3.37
273	276	14573	Eagle Granodiorite	1276.8	4.31

Hole SP-19-04 - Summary Log

From	To	Number		Cu(ppm)	Mo(ppm)
0	6	N/A	Overburden		
6	8	14488	Eagle Granodiorite	350.0	2.73
8	11	14489	Eagle Granodiorite	419.4	2.72
11	14	14490	Eagle Granodiorite	422.6	3.13
14	17	14491	Eagle Granodiorite	447.4	3.2
17	20	14492	Eagle Granodiorite	319.4	1.31
20	23	14493	Eagle Granodiorite	795.3	1.55
23	26	14494	Eagle Granodiorite	610.2	1.61
26	29	14496	Eagle Granodiorite	269.2	1.22
29	32	14497	Eagle Granodiorite	269.0	1.16
32	35	14498	Eagle Granodiorite	331.1	0.86
35	38		Eagle Granodiorite		
38	41		Eagle Granodiorite		
41	44		Eagle Granodiorite		
44	47	14499	Eagle Granodiorite	615.7	1.01
47	50		Eagle Granodiorite		
50	53		Eagle Granodiorite		
53	56	14500	Eagle Granodiorite	291.6	1.41
56	59.15	14501	Eagle Granodiorite	215.0	0.82
59.15	62	14502	Felsic Feldspar Porphyry	258.3	2.98
62	65	14503	Felsic Feldspar Porphyry	535.5	1.37
65	68	14504	Felsic Feldspar Porphyry	409.0	1.19
68	71		Felsic Feldspar Porphyry		
71	74		Felsic Feldspar Porphyry		
74	77		Felsic Feldspar Porphyry		
77	77.7	14505	Felsic Feldspar Porphyry	426.8	0.68
77.7	80	14506	Felsic Feldspar Porphyry	314.9	1.01
80	83		Felsic Feldspar Porphyry		
83	86	14507	Felsic Feldspar Porphyry	702.5	1.2
86	89	14508	Felsic Feldspar Porphyry	420.0	1.44
89	90.3	14509	Felsic Feldspar Porphyry	471.9	1.82
90.3	91.3	14511	Felsic Feldspar Porphyry	241.1	0.9
91.3	92	14512	Eagle Granodiorite	766.2	2.22
92	95.2	14513	Eagle Granodiorite	807.2	1.32
95.2	96	14514	Eagle Granodiorite	408.7	3.44
96	98	14515	Eagle Granodiorite	445.7	2.24
98	101	14516	Eagle Granodiorite	805.4	5.96
101	104	14517	Eagle Granodiorite	910.1	5.26
104	107	14518	Eagle Granodiorite	471.4	2.3

Hole SP-19-04 - Summary Log

From	To	Number		Cu(ppm)	Mo(ppm)
107	110		Eagle Granodiorite		
110	113		Eagle Granodiorite		
113	116		Eagle Granodiorite		
116	119	14519	Eagle Granodiorite	513.7	1.83
119	122		Eagle Granodiorite		
122	123		Eagle Granodiorite		
123	127.5		Mafic Dyke		
127.5	128		Eagle Granodiorite		
128	131		Eagle Granodiorite		
131	134		Eagle Granodiorite		
134	137		Eagle Granodiorite		
137	138.75		Eagle Granodiorite		
138.75	142		Mafic Dyke		
142	143		Eagle Granodiorite		
143	146		Eagle Granodiorite		
146	149		Eagle Granodiorite		
149	152		Eagle Granodiorite		
152	155		Eagle Granodiorite		
155	158		Eagle Granodiorite		
158	161		Eagle Granodiorite		
161	164		Felsic Feldspar Porphyry		
164	167		Felsic Feldspar Porphyry		
167	169.3		Felsic Feldspar Porphyry		
169.3	170		Eagle Granodiorite		
170	173	14520	Eagle Granodiorite	566.2	1.78
173	173.7	14521	Eagle Granodiorite	188.8	1.62
173.7	176	14522	Eagle Granodiorite	230.1	1.97
176	179	14523	Eagle Granodiorite	488.8	1.84
179	182	14524	Eagle Granodiorite	779.9	1.92
182	185.3	14526	Eagle Granodiorite	1053.2	3.88
185.3	186.9		Mafic Dyke	0.0	0.00
186.9	188	14527	Eagle Granodiorite	574.4	1.97
188	191	14528	Eagle Granodiorite	2065.7	2.72
191	194	14529	Eagle Granodiorite	1056.2	2.59
194	197	14530	Eagle Granodiorite	751.7	3.60
197	200	14531	Eagle Granodiorite	1480.9	8.12
200	203	14532	Eagle Granodiorite	433.5	2.73
203	205	14533	Eagle Granodiorite	342.7	1.83
205	206.4		Mafic Dyke	0.0	0.00

Hole SP-19-04 - Summary Log

From	To	Number		Cu(ppm)	Mo(ppm)
206.4	209	14534	Eagle Granodiorite	475.6	2.11
209	212	14535	Eagle Granodiorite	524.0	2.10
212	215	14536	Eagle Granodiorite	711.6	2.29
215	218	14537	Eagle Granodiorite	660.8	4.46
218	221	14538	Eagle Granodiorite	362.8	5.68
221	224	14539	Eagle Granodiorite	406.9	8.50
224	227	14541	Eagle Granodiorite	732.7	2.57
227	230	14542	Eagle Granodiorite	535.3	3.03
230	233	14543	Eagle Granodiorite	424.4	4.07
233	236	14544	Eagle Granodiorite	536.7	2.62
236	239	14545	Eagle Granodiorite	561.8	2.10
239	242	14546	Eagle Granodiorite	299.3	3.92
242	245	14547	Eagle Granodiorite	550.4	1.80
245	248	14548	Eagle Granodiorite	509.1	1.93
248	251	14549	Eagle Granodiorite	1005.8	7.40
251	254	14550	Eagle Granodiorite	817.9	14.29
254	257	14551	Eagle Granodiorite	1188.8	17.40
257	260	14552	Eagle Granodiorite	816.4	11.41
260	263	14553	Eagle Granodiorite	649.9	54.15
263	264.05	14554	Eagle Granodiorite	483.2	7.51
264.05	266	14556	Mafic Dyke	127.6	1.87

Appendix II
Drill Logs

Abbreviations	
Sx	Sulphides
Epi	Epidote
Chl	Chlorite
Diss	Disseminated
dm	decimetre
+/-	may include
SAA	Same As Above
Py	Pyrite
Cpy	Chalcopyrite
Mo	Molybdenite
tca	to core axis

Hole	SP-19-01
Easting	624793
Northing	5530529
Azimuth	60°
Dip	-45
Depth	260
Start	June 3, 2019
End	June 7, 2019
Logger	Steven Kramar

Interval		Sample	Lithology	Description
From	To	Number		
0	6	N/A	Overburden	No Recovery, Overburden/Casing
7	9	14251	Eagle Granodiorite	1-10 % Diss. Sx, up to 5 % Epi, +/- 1 dm silicious bands, veining is hair line (10 %) dominantly QZ, CHL and +/- Sx, strongly foliated @ high angle tca defined by preferential alignment of biotite
9	11	14574	Eagle Granodiorite	SAA (GD)
11	13	14575	Eagle Granodiorite	SAA (GD)
13	14.9	14576	Eagle Granodiorite	SAA (GD)
14.9	16.5	14252	Pegmatite Dyke	Coarse grained, micaceous, garnetiferous K-Feld pegmatite. Trace secondary Py
16.15	19.15	14577	Pegmatite Dyke	SAA (GD)
19.15	22	14253	Eagle Granodiorite	SAA (GD), weak to moderate musc/ser alteration, weak to moderate chl alteration in veins
22	23	14578	Eagle Granodiorite	SAA (GD)
23	25	14579	Eagle Granodiorite	SAA (GD)
25	26	14580	Eagle Granodiorite	SAA (GD), Silicious QTZ Intru?
26	29	14581	Eagle Granodiorite	SAA (GD), Silicious QTZ Intru?
29	32	14582	Eagle Granodiorite	SAA (GD), Stronger Muscovite Alteration, Fault?, +/- Fracture control Py
32	35	14583	Eagle Granodiorite	SAA (GD), Stronger Muscovite Alteration, Fault?, +/- Fracture control Py
35	38	14584	Eagle Granodiorite	SAA (GD), Stronger Muscovite Alteration, Fault?, +/- Fracture control Py
38	41	14586	Eagle Granodiorite	SAA (GD)
41	44	14587	Eagle Granodiorite	SAA (GD)
44	47	14588	Eagle Granodiorite	SAA (GD)
47	50	14589	Eagle Granodiorite	SAA (GD)
50	50.9	14590	Eagle Granodiorite	SAA (GD)
50.9	54	14254	Eagle Granodiorite	Increased alteration, higher concentration of hairline fractures, filled with chl+Sx+KSP
54	57	14591	Eagle Granodiorite	SAA (GD), Foliation at high angle tca, 1-10 % diss sx, chl+sx+qtz fracture controlled, 1-5 % Epi
57	60	14592	Eagle Granodiorite	SAA (GD)
60	64	14593	Eagle Granodiorite	SAA (GD)
64	65	14594	Eagle Granodiorite	SAA (GD)
65	71		Eagle Granodiorite	SAA (GD)
71	74	14595	Eagle Granodiorite	SAA (GD), + 0.25 m Fel Dyke

74	74.5		Eagle Granodiorite	SAA (GD)
74.5	76.4		Pegmatite Dyke	SAA (PEG)
76.4	80		Eagle Granodiorite	SAA (GD)
80	83	14596	Eagle Granodiorite	SAA (GD)
83	85.1		Eagle Granodiorite	SAA (GD)
85.1	89.5		Pegmatite Dyke	SAA (PEG), low angle tca dyke
89.5	92		Eagle Granodiorite	SAA (GD)
92	95	14597	Eagle Granodiorite	SAA (GD)
95	107		Eagle Granodiorite	SAA (GD), Quartz Dior? Silicious GD? Maybe a more strongly alterted Eagle?
107	110	14598	Eagle Granodiorite	SAA (GD)
110	113		Eagle Granodiorite	SAA (GD)
113	114.5		Felsic Dyke	Aphanitic Felsic Dyke?
114.5	115.3		Eagle Granodiorite	SAA (GD)
115.3	119.95		Pegmatite Dyke	SAA (PEG)
119.95	122	14599	Eagle Granodiorite	SAA (GD)
122	125	14601	Eagle Granodiorite	SAA (GD)
125	125.7		Pegmatite Dyke	SAA (PEG)
125.7	134		Eagle Granodiorite	SAA (GD)
134	137	14602	Eagle Granodiorite	SAA (GD)
137	138.9		Eagle Granodiorite	SAA (GD)
138.9	140.2		Mafic Dyke	Fine grained green - plag phyric mafic dyke.
140.2	143		Eagle Granodiorite	SAA (GD)
143	146	14603	Eagle Granodiorite	SAA (GD)
146	150		Eagle Granodiorite	SAA (GD)
150	152	14605	Eagle Granodiorite	SAA (GD)
152	155	14604	Eagle Granodiorite	SAA (GD)
155	157.1	14606	Eagle Granodiorite	SAA (GD), Increased Alteration?
157.1	158		Eagle Granodiorite	SAA (GD), Increased Alteration?
158	161	14607	Eagle Granodiorite	SAA (GD), Increased Alteration?
161	167		Eagle Granodiorite	SAA (GD), Increased Alteration?
167	169.3	14608	Eagle Granodiorite	SAA (GD), potassic altered? +/- vugs with sx, chalky feldspars
169.3	171	14609	Eagle Granodiorite	SAA (GD), potassic altered? +/- vugs with sx, chalky feldspars
171	173	14610	Eagle Granodiorite	SAA (GD)
173	182		Eagle Granodiorite	SAA (GD)
182	185	14611	Eagle Granodiorite	SAA (GD)
185	189.3		Eagle Granodiorite	SAA (GD)
189.3	191.1		Pegmatite Dyke	SAA (PEG)
191.1	194		Eagle Granodiorite	SAA (GD)
194	197	14612	Eagle Granodiorite	SAA (GD)
197	200	14613	Eagle Granodiorite	SAA (GD)
200	203	14614	Eagle Granodiorite	SAA (GD)

203	207		Eagle Granodiorite	SAA (GD)
207	209	14277	Eagle Granodiorite	SAA (GD)
209	211.5	14278	Mafic Dyke	Almost entirely biotite(?) appreciable epi (5 %) and up to 5 % py on fracture surfaces.
211.5	214.6	14279	Eagle Granodiorite	SAA (GD)
214.6	221		Eagle Granodiorite	SAA (GD)
221	223	14255	Eagle Granodiorite	SAA (GD)
223	224	14256	Eagle Granodiorite	SAA (GD)
224	225.9	14257	Eagle Granodiorite	SAA (GD), Strong qtz-ser alteration with PEG intru. Strong concentration of sx, +/- Mo in quartz veins. +/- KSP alteration in qtz veins
225.9	227	14258	Eagle Granodiorite	SAA (GD), dm intervals of quartz veins, increased sx as qtz-sx-chl veins, up to 5 % epi
227	229	14259	Eagle Granodiorite	SAA (GD), dm intervals of quartz veins, increased sx as qtz-sx-chl veins, up to 5 % epi
229	231	14260	Eagle Granodiorite	SAA (GD), dm intervals of quartz veins, increased sx as qtz-sx-chl veins, up to 5 % epi
231	233	14262	Eagle Granodiorite	SAA (GD), dm intervals of quartz veins, increased sx as qtz-sx-chl veins, up to 5 % epi
233	235	14263	Eagle Granodiorite	SAA (GD), dm intervals of quartz veins, increased sx as qtz-sx-chl veins, up to 5 % epi
235	237	14264	Eagle Granodiorite	SAA (GD), dm intervals of quartz veins, increased sx as qtz-sx-chl veins, up to 5 % epi
237	239	14265	Eagle Granodiorite	SAA (GD), dm intervals of quartz veins, increased sx as qtz-sx-chl veins, up to 5 % epi
239	241	14266	Eagle Granodiorite	SAA (GD), dm intervals of quartz veins, increased sx as qtz-sx-chl veins, up to 5 % epi
241	243	14267	Eagle Granodiorite	SAA (GD), dm intervals of quartz veins, increased sx as qtz-sx-chl veins, up to 5 % epi
243	245	14268	Eagle Granodiorite	SAA (GD), dm intervals of quartz veins, increased sx as qtz-sx-chl veins, up to 5 % epi
245	247	14269	Eagle Granodiorite	SAA (GD), dm intervals of quartz veins, increased sx as qtz-sx-chl veins, up to 5 % epi
247	249	14270	Eagle Granodiorite	SAA (GD), dm intervals of quartz veins, increased sx as qtz-sx-chl veins, up to 5 % epi
249	251	14272	Eagle Granodiorite	SAA (GD), dm intervals of quartz veins, increased sx as qtz-sx-chl veins, up to 5 % epi
251	253	14273	Eagle Granodiorite	SAA (GD), Strongly Altered, 1-5 cm quartz bands w/ py/chl, feldspars can be strongly altered (albite?). Local KSP alteration. Hairline Chl-py viens throughout.
253	255	14274	Eagle Granodiorite	SAA (GD), Strongly Altered, 1-5 cm quartz bands w/ py/chl, feldspars can be strongly altered (albite?). Local KSP alteration. Hairline Chl-py viens throughout.
255	257	14275	Eagle Granodiorite	SAA (GD), Strongly Altered, 1-5 cm quartz bands w/ py/chl, feldspars can be strongly altered (albite?). Local KSP alteration. Hairline Chl-py viens throughout.
257	258.4	14276	Eagle Granodiorite	SAA (GD), Strongly Altered, 1-5 cm quartz bands w/ py/chl, feldspars can be strongly altered (albite?). Local KSP alteration. Hairline Chl-py viens throughout.
258.4	260	14280	Eagle Granodiorite	SAA (GD), Strongly Altered, 1-5 cm quartz bands w/ py/chl, feldspars can be strongly altered (albite?). Local KSP alteration. Hairline Chl-py viens throughout.

Hole	SP-19-02
Easting	624073
Northing	5530878
Azimuth	60°
Dip	-70
Depth	285
Start	June 7, 2019
End	June 11, 2019
Logger	Steven Kramar

Interval		Sample	Lithology	Description
From	To	Number		
0	1.5	N/A	Overburden	No Recovery, Overburden/Casing
1.5	3.7		Eagle Granodiorite	Foliated, Biotite Granodiorite. Preferential orientation defined by alignment of biotite (GD) Oxidized potassic altered GD, limonite on fracture surfaces, +/- fault gouge
3.7	4.35		Pegmatite Dyke	Coarse grained micaceous k-feldspar pegmatite dyke (syenogranite pegmatite). Barren oxidized, +/- rehealed fault breccia?
4.35	7	14282	Eagle Granodiorite	SAA (GD), oxidized fracture surfaces, foliation ~ 45-40* tca, moderate KSP alteration on vein selvages, trace Sx
7	10.5	14283	Eagle Granodiorite	SAA (GD), oxidized fracture surfaces, foliation ~ 45-40* tca, moderate KSP alteration on vein selvages, trace Sx
10.5	12	14284	Pegmatite Dyke	SAA (PEG), 5 % hairline cross cutting oxidized veins with sx and limoite on fracture surfaces. Hydrothermal biotite?
12	13.85	14285	Pegmatite Dyke	SAA (PEG), 5 % hairline cross cutting oxidized veins with sx and limoite on fracture surfaces. Hydrothermal biotite?
13.85	16	14286	Eagle Granodiorite	SAA (GD) local zones of strong oxidation on fracture surfaces. 1-5 % Sx in hairline/cross cutting veins, feldspars can look "chalky" (kaolinized?) +/- CuFeS?
16	18	14287	Eagle Granodiorite	SAA (GD) local zones of strong oxidation on fracture surfaces. 1-5 % Sx in hairline/cross cutting veins, feldspars can look "chalky" (kaolinized?) +/- CuFeS?
18	22	14288	Eagle Granodiorite	SAA (GD) local zones of strong oxidation on fracture surfaces. 1-5 % Sx in hairline/cross cutting veins, feldspars can look "chalky" (kaolinized?) +/- CuFeS?
22	24	14289	Eagle Granodiorite	SAA (GD) local zones of strong oxidation on fracture surfaces. 1-5 % Sx in hairline/cross cutting veins, feldspars can look "chalky" (kaolinized?) +/- CuFeS?
24	26	14290	Eagle Granodiorite	SAA (GD) local zones of strong oxidation on fracture surfaces. 1-5 % Sx in hairline/cross cutting veins, feldspars can look "chalky" (kaolinized?) +/- CuFeS?
26	28	14292	Eagle Granodiorite	SAA (GD) local zones of strong oxidation on fracture surfaces. 1-5 % Sx in hairline/cross cutting veins, feldspars can look "chalky" (kaolinized?) +/- CuFeS?
28	28.75	14293	Eagle Granodiorite	SAA (GD) local zones of strong oxidation on fracture surfaces. 1-5 % Sx in hairline/cross cutting veins, feldspars can look "chalky" (kaolinized?) +/- CuFeS?
28.75	31.3	14294	Dyke? Fault Breccia?	Large angular FS "clasts" in an annealed(?) sericite matrix. Dark grey hairline veins throughout, towards bottom strongly oxizided x-cutting veins/void space. Upper/Lower Contacts ~ 60* tca
31.3	34.34	14295	Eagle Granodiorite	SAA (GD) w/ high proportion of hairline py filled fractures, +/- chlorite, and feldspars alt. to musc.
34.34	35.1	14296	Felsic Dyke	fine grained groundmass, w/ mm quartz-eyes, sucrosic texture. Upper/Lower Contact ~ 50* tca
35.1	35.4	14297	Eagle Granodiorite	SAA (GD)
35.4	37	14298	Felsic Feldspar Porphyry	FS +/- QTZ porph with abundant fractures filled with Sx
37	38.95	14299	Eagle Granodiorite	SAA (GD)
38.95	40.2	14300	Pegmatite Dyke	SAA (PEG)
40.2	42	14302	Eagle Granodiorite	Foliated GD, limonite on fracture surfaces, FS are "chalky" (musc?) altered, hydrothermal biotite, sericite on fracture surfaces Chl+Sx filled hairline veins.
42	44	14303	Eagle Granodiorite	Foliated GD, limonite on fracture surfaces, FS are "chalky" (musc?) altered, hydrothermal biotite, sericite on fracture surfaces Chl+Sx filled hairline veins.
44	45.5	14304	Eagle Granodiorite	Foliated GD, limonite on fracture surfaces, FS are "chalky" (musc?) altered, hydrothermal biotite, sericite on fracture surfaces Chl+Sx filled hairline veins.
45.5	48.5	14305	Pegmatite Dyke	Low Angle (sub verticle) PEG intrusion, limonite on fracture surfaces, hairline veins with Chl-Sx
48.5	51.2	14306	Pegmatite Dyke	Low Angle (sub verticle) PEG intrusion, limonite on fracture surfaces, hairline veins with Chl-Sx
51.2	54	14307	Eagle Granodiorite	Weakly Musc. Alteration, limonite/oxidation of fracture surfaces. Few local intervals of 1-3 cm potassic altered veins.

Interval		Sample	Lithology	Description
From	To	Number		
54	57	14308	Eagle Granodiorite	Weakly Musc. Alteration, limonite/oxidation of fracture surfaces. Few local intervals of 1-3 cm potassic altered veins.
57	58.9	14309	Eagle Granodiorite	Weakly Musc. Alteration, limonite/oxidation of fracture surfaces. Few local intervals of 1-3 cm potassic altered veins.
58.9	59.5	14310	Felsic Dyke	Fine grained, massive sucrosic texture (grey) hairline fractures with qtz-ksp-chl-sx
59.5	62	14312	Eagle Granodiorite	SAA (GD)
62	64	14313	Eagle Granodiorite	SAA (GD)
64	66	14314	Eagle Granodiorite	SAA (GD)
66	68	14315	Eagle Granodiorite	SAA (GD)
68	69.4	14316	Eagle Granodiorite	SAA (GD)
69.4	69.67	14317	Felsic Quartz Porphyry	Quartz Porph? 30 cm quartz phenos, qtz-carb matrix BARREN
69.67	72	14318	Eagle Granodiorite	SAA (GD)
72	73.7	14319	Eagle Granodiorite	SAA (GD)
73.7	74.35	14320	Andesite (?) Dyke	Dark green fine grained, 5 % epidote, 70 % biotite with core parallel qtz-sx-ser veins. 35/50* tca upper/lower contacts
74.35	76	14322	Eagle Granodiorite	Strong Alt, numerous chl-py-cpy veins, potassic alteration of vein selvages, musc alt Feldspars, limonite on fracture surfaces. KSP-CHL-SX veins are cross cut by QTZ-PY veins
76	79	14323	Eagle Granodiorite	Strong Alt, numerous chl-py-cpy veins, potassic alteration of vein selvages, musc alt Feldspars, limonite on fracture surfaces. KSP-CHL-SX veins are cross cut by QTZ-PY veins
79	82	14324	Eagle Granodiorite	Strong Alt, numerous chl-py-cpy veins, potassic alteration of vein selvages, musc alt Feldspars, limonite on fracture surfaces. KSP-CHL-SX veins are cross cut by QTZ-PY veins
82	85.65	14325	Eagle Granodiorite	Strong Alt, numerous chl-py-cpy veins, potassic alteration of vein selvages, musc alt Feldspars, limonite on fracture surfaces. KSP-CHL-SX veins are cross cut by QTZ-PY veins
85.65	87	14326	Eagle Granodiorite	STRONGLY altered GD, w/ +/- FP#1 intervals. Abundant hairline veins with CHL-QTZ-KSP-SX, locally FS can be "chalky" (albite/Kaol altered?) Local silicious intervals. CHECK ASSAYS
87	89	14327	Eagle Granodiorite	STRONGLY altered GD, w/ +/- FP#1 intervals. Abundant hairline veins with CHL-QTZ-KSP-SX, locally FS can be "chalky" (albite/Kaol altered?) Local silicious intervals. CHECK ASSAYS
89	91.3	14328	Eagle Granodiorite	STRONGLY altered GD, w/ +/- FP#1 intervals. Abundant hairline veins with CHL-QTZ-KSP-SX, locally FS can be "chalky" (albite/Kaol altered?) Local silicious intervals. CHECK ASSAYS
91.3	92.45	14329	Eagle Granodiorite	Mixed GD-PEG-FP Interval. Intense Musc alteration of FS. Abundant hairline chlorite veins.
92.45	94.3	14330	Felsic Feldspar Porphyry	All FS "chalky" (albite? Kaol?) abundant hairline veins w/ chl-ser cores, relict foliation (?) defined by biotite
94.3	96	14331	Pegmatite Dyke	SAA (PEG)
96	98	14332	Eagle Granodiorite	Altered GD. Cpy in hairline fractures, chlorite cores, mild KSP alt. on vein selvages. Biotite defining foliation
98	100.3	14333	Eagle Granodiorite	Altered GD. Cpy in hairline fractures, chlorite cores, mild KSP alt. on vein selvages. Biotite defining foliation
100.3	102	14334	Felsic Feldspar Porphyry	weak relict foliation (?) defined by biotite, "chalky" feldspars, with 5-10 mm abundant chl veins with cpy and py. Is this strongly alltered GD?
102	104.5	14335	Felsic Feldspar Porphyry	weak relict foliation (?) defined by biotite, "chalky" feldspars, with 5-10 mm abundant chl veins with cpy and py. Is this strongly alltered GD?
104.5	106.85	14337	Eagle Granodiorite	weak relict foliation (?) defined by biotite, "chalky" feldspars, with 5-10 mm abundant chl veins with cpy and py. Is this strongly alltered GD?
106.85	108.66	14338	Andesite (?) Dyke	Fine grained dark, 70 % Fe-Mg's, 1-2 % Sx in qtz-Chl veins
108.66	110	14339	Eagle Granodiorite	Altered GD. Two main types of veins, KSP-Cpy-Py veins cross cut by Chl-Sx veins.
110	112	14340	Eagle Granodiorite	Altered GD. Two main types of veins, KSP-Cpy-Py veins cross cut by Chl-Sx veins.
112	114	14341	Eagle Granodiorite	Altered GD. Two main types of veins, KSP-Cpy-Py veins cross cut by Chl-Sx veins.
114	116	14342	Eagle Granodiorite	Altered GD. Two main types of veins, KSP-Cpy-Py veins cross cut by Chl-Sx veins.

Interval		Sample	Lithology	Description
From	To	Number		
116	117.5	14343	Eagle Granodiorite	Altered GD. Two main types of veins, KSP-Cpy-Py veins cross cut by Chl-Sx veins.
117.5	118.95	14344	Eagle Granodiorite	Altered GD. Two main types of veins, KSP-Cpy-Py veins cross cut by Chl-Sx veins.
118.95	121.9	14345	Pegmatite Dyke	Mixed Interval. Pervasive Chl alt.
121.9	124	14346	Eagle Granodiorite	SAA (GD), Abundant tight KSP, Qtz +Sx veins, KSP veins are crosscut by qtz-chl-sx veins
124	126	14347	Eagle Granodiorite	SAA (GD), Abundant tight KSP, Qtz +Sx veins, KSP veins are crosscut by qtz-chl-sx veins
126	128	14348	Eagle Granodiorite	SAA (GD), Abundant tight KSP, Qtz +Sx veins, KSP veins are crosscut by qtz-chl-sx veins
128	130	14349	Eagle Granodiorite	SAA (GD), Abundant tight KSP, Qtz +Sx veins, KSP veins are crosscut by qtz-chl-sx veins
130	132	14350	Eagle Granodiorite	SAA (GD), Abundant tight KSP, Qtz +Sx veins, KSP veins are crosscut by qtz-chl-sx veins
132	134	14352	Eagle Granodiorite	SAA (GD), Abundant tight KSP, Qtz +Sx veins, KSP veins are crosscut by qtz-chl-sx veins
134	136	14353	Eagle Granodiorite	SAA (GD), Abundant tight KSP, Qtz +Sx veins, KSP veins are crosscut by qtz-chl-sx veins
136	138	14354	Eagle Granodiorite	SAA (GD), Abundant tight KSP, Qtz +Sx veins, KSP veins are crosscut by qtz-chl-sx veins
138	139	14355	Eagle Granodiorite	SAA (GD), Abundant tight KSP, Qtz +Sx veins, KSP veins are crosscut by qtz-chl-sx veins
139	140.65	14356	Pegmatite Dyke	SAA (PEG) Chl + Py veins, KSP alt, feldspars are "chalky".
140.65	142	14357	Eagle Granodiorite	SAA (GD), Altered intervals w/ 70 cm local pegmatite intrusion. Veins w/ KSP selvages, cross cut by chl-py veins. Locally, FS can be "chalky"
142	144	14358	Eagle Granodiorite	SAA (GD), Altered intervals w/ 70 cm local pegmatite intrusion. Veins w/ KSP selvages, cross cut by chl-py veins. Locally, FS can be "chalky"
144	146	14359	Eagle Granodiorite	SAA (GD), Altered intervals w/ 70 cm local pegmatite intrusion. Veins w/ KSP selvages, cross cut by chl-py veins. Locally, FS can be "chalky"
146	148	14360	Eagle Granodiorite	SAA (GD), Fault @ 147-147.2 m
148	150	14361	Eagle Granodiorite	SAA (GD), Altered intervals w/ 70 cm local pegmatite intrusion. Veins w/ KSP selvages, cross cut by chl-py veins. Locally, FS can be "chalky"
150	152	14362	Eagle Granodiorite	SAA (GD), Altered intervals w/ 70 cm local pegmatite intrusion. Veins w/ KSP selvages, cross cut by chl-py veins. Locally, FS can be "chalky"
152	154	14363	Eagle Granodiorite	SAA (GD), Altered intervals w/ 70 cm local pegmatite intrusion. Veins w/ KSP selvages, cross cut by chl-py veins. Locally, FS can be "chalky"
154	156	14364	Eagle Granodiorite	SAA (GD), Altered intervals w/ 70 cm local pegmatite intrusion. Veins w/ KSP selvages, cross cut by chl-py veins. Locally, FS can be "chalky"
156	158	14366	Eagle Granodiorite	SAA (GD), Altered intervals w/ 70 cm local pegmatite intrusion. Veins w/ KSP selvages, cross cut by chl-py veins. Locally, FS can be "chalky"
158	160	14367	Eagle Granodiorite	SAA (GD), Altered intervals w/ 70 cm local pegmatite intrusion. Veins w/ KSP selvages, cross cut by chl-py veins. Locally, FS can be "chalky"
160	162	14368	Eagle Granodiorite	SAA (GD), Altered intervals w/ 70 cm local pegmatite intrusion. Veins w/ KSP selvages, cross cut by chl-py veins. Locally, FS can be "chalky"
162	164	14369	Eagle Granodiorite	SAA (GD), Altered intervals w/ 70 cm local pegmatite intrusion. Veins w/ KSP selvages, cross cut by chl-py veins. Locally, FS can be "chalky"
164	166	14370	Eagle Granodiorite	SAA (GD), Alteration wanes, back to "normal" GD, foliation 45-50* tca
166	168	14372	Eagle Granodiorite	SAA (GD), Alteration wanes, back to "normal" GD, foliation 45-50* tca
168	170	14373	Eagle Granodiorite	SAA (GD), Alteration wanes, back to "normal" GD, foliation 45-50* tca
170	172.1	14374	Eagle Granodiorite	SAA (GD), Alteration wanes, back to "normal" GD, foliation 45-50* tca
172.1	174	14375	Eagle Granodiorite	SAA (GD), Alteration wanes, back to "normal" GD, foliation 45-50* tca
174	176	14376	Eagle Granodiorite	SAA (GD), Alteration wanes, back to "normal" GD, foliation 45-50* tca
176	178.3	14377	Eagle Granodiorite	SAA (GD), Alteration wanes, back to "normal" GD, foliation 45-50* tca
178.3	179.5	14378	Pegmatite Dyke	SAA (PEG) Faulted with Sx +/- graphite (?) on slip surfaces, ~ 5 % sub-Eu Py on fracture surfaces.
179.5	182	14379	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.
182	184	14380	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.
184	186	14382	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.
186	188	14383	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.
188	190	14384	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.
190	192	14385	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.

Interval		Sample	Lithology	Description
From	To	Number		
192	194	14386	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.
194	196	14387	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.
196	198	14388	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.
198	200	14389	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.
200	202	14390	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.
202	204	14392	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.
204	206	14393	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.
206	208	14394	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.
208	210	14395	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.
210	212	14396	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.
212	214	14397	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.
214	216	14398	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.
216	218	14399	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.
218	220	14400	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.
220	222	14402	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.
222	224	14403	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.
224	226	14404	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.
226	228	14405	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.
228	230	14406	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.
230	232	14407	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.
232	234	14408	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.
234	236	14409	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.
236	238	14410	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.
238	240	14412	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.
240	242	14413	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.
242	244	14414	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.
244	246	14415	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.
246	248	14416	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.
248	250	14417	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.
250	252	14418	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.
252	254	14419	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.
254	256	14420	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.
256	258	14422	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.
258	260	14423	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.
260	262	14424	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.
262	264	14425	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.
264	266.15	14426	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.
266.15	268	14427	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.
268	270	14428	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.

Interval		Sample	Lithology	Description
From	To	Number		
270	272	14429	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.
272	274	14430	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.
274	276	14432	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.
276	277.05	14433	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.
277.05	279	14434	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.
279	281	14435	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.
281	283	14436	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.
283	285	14437	Eagle Granodiorite	SAA (GD), Generally consistent w/ local intervals of increased alteration (pervasive musc./ser)+/- KSP alt, 1-5 % Sx on Qtz-Chl (occassionally KSP-QTZ-CHL-SX) veins.

Hole	SP-19-01
Easting	624257
Northing	5531035
Azimuth	0
Dip	-90
Depth	296
Start	June 11, 2019
End	June 13, 2019
Logger	Steven Kramar

Interval		Sample	Lithology	Description
From	To	Number		
0	1.5	N/A	Overburden	No Recovery, Overburden/Casing
1.5	3	14438	Eagle Granodiorite	Broken, Rubblely, Foliated oxidized biotite granodiorite. Foliation defined by biotite. Chalky white Feldspars (Kaol?) due to near surface ox+weathering? Strong ox qtz veins mineralized with cpy/py?
3	6	14439	Eagle Granodiorite	Broken, Rubblely, Foliated oxidized biotite granodiorite. Foliation defined by biotite. Chalky white Feldspars (Kaol?) due to near surface ox+weathering? Strong ox qtz veins mineralized with cpy/py?
6	9	14440	Eagle Granodiorite	Broken, Rubblely, Foliated oxidized biotite granodiorite. Foliation defined by biotite. Chalky white Feldspars (Kaol?) due to near surface ox+weathering? Strong ox qtz veins mineralized with cpy/py?
9	12	14442	Eagle Granodiorite	Broken, Rubblely, Foliated oxidized biotite granodiorite. Foliation defined by biotite. Chalky white Feldspars (Kaol?) due to near surface ox+weathering? Strong ox qtz veins mineralized with cpy/py?
12	15	14443	Eagle Granodiorite	Broken, Rubblely, Foliated oxidized biotite granodiorite. Foliation defined by biotite. Chalky white Feldspars (Kaol?) due to near surface ox+weathering? Strong ox qtz veins mineralized with cpy/py?
15	16.7	14444	Eagle Granodiorite	Broken, Rubblely, Foliated oxidized biotite granodiorite. Foliation defined by biotite. Chalky white Feldspars (Kaol?) due to near surface ox+weathering? Strong ox qtz veins mineralized with cpy/py?
16.7	18.25	14445	Eagle Granodiorite	Broken, Rubblely, Foliated oxidized biotite granodiorite. Foliation defined by biotite. Chalky white Feldspars (Kaol?) due to near surface ox+weathering? Strong ox qtz veins mineralized with cpy/py?
18.25	21	14446	Felsic Feldspar Porphyry	1-5 mm feldspar phenocrysts in a dark grey (black) fine grained matrix with ~ 10 % biotite. Trace diss. Py+cpy, common 5 mm - 1 cm vuggy quartz veins., sulphides on fracture surfaces are strongly oxidized
21	24		Felsic Feldspar Porphyry	1-5 mm feldspar phenocrysts in a dark grey (black) fine grained matrix with ~ 10 % biotite. Trace diss. Py+cpy, common 5 mm - 1 cm vuggy quartz veins., sulphides on fracture surfaces are strongly oxidized
24	27		Felsic Feldspar Porphyry	1-5 mm feldspar phenocrysts in a dark grey (black) fine grained matrix with ~ 10 % biotite. Trace diss. Py+cpy, common 5 mm - 1 cm vuggy quartz veins., sulphides on fracture surfaces are strongly oxidized
27	30	14447	Felsic Feldspar Porphyry	SAA (FP#1) vein count beings, core becomes competent enough. Microfractures with malachite/ Fe-ox staining.
30	33	14448	Felsic Feldspar Porphyry	SAA (FP#1)
33	36	14449	Felsic Feldspar Porphyry	SAA (FP#1)
36	39	14450	Felsic Feldspar Porphyry	SAA (FP#1)
39	42	14452	Felsic Feldspar Porphyry	SAA (FP#1)
42	45	14453	Felsic Feldspar Porphyry	SAA (FP#1)

Interval		Sample	Lithology	Description
From	To	Number		
45	48		Felsic Feldspar Porphyry	SAA (FP#1), porphyry becomes more crowded, 3-8 mm phenocrysts, ~10 % biotite, trace cpy/py disseminated throughout. Contains magnetite (microfracture or diss throughout?)
48	51		Felsic Feldspar Porphyry	SAA (FP#1), FS becomes "chalky"
51	54		Felsic Feldspar Porphyry	SAA (FP#1), FS becomes "chalky"
54	57		Felsic Feldspar Porphyry	SAA (FP#1), FS becomes "chalky"
57	60		Felsic Feldspar Porphyry	SAA (FP#1), FS becomes "chalky"
60	63	14616	Felsic Feldspar Porphyry	SAA (FP#1), FS becomes "chalky"
63	66	14619	Felsic Feldspar Porphyry	SAA (FP#1), FS becomes "chalky"
66	69	14618	Felsic Feldspar Porphyry	SAA (FP#1), FS becomes "chalky"
69	72	14617	Felsic Feldspar Porphyry	SAA (FP#1), FS becomes "chalky"
72	75	14454	Felsic Feldspar Porphyry	SAA (FP#1), increasing vein density, start to see more KSP alt on vein selvages, intervals of quartz intru, FS can be chalk white locally.
75	78	14455	Felsic Feldspar Porphyry	SAA (FP#1), increasing vein density, start to see more KSP alt on vein selvages, intervals of quartz intru, FS can be chalk white locally.
78	81	14620	Felsic Feldspar Porphyry	SAA (FP#1), increasing vein density, start to see more KSP alt on vein selvages, intervals of quartz intru, FS can be chalk white locally.
81	84	14456	Felsic Feldspar Porphyry	SAA (FP#1), increasing vein density, start to see more KSP alt on vein selvages, intervals of quartz intru, FS can be chalk white locally, @ 83.9 - Fault Gouge, 10 cm
84	87	14621	Felsic Feldspar Porphyry	SAA (FP#1), increasing vein density, start to see more KSP alt on vein selvages, intervals of quartz intru, FS can be chalk white locally.
87	90		Felsic Feldspar Porphyry	SAA (FP#1), increasing vein density, start to see more KSP alt on vein selvages, intervals of quartz intru, FS can be chalk white locally. @87.2 - 20 cm qtz vein trace py
90	93	14457	Felsic Feldspar Porphyry	SAA (FP#1), increasing vein density, start to see more KSP alt on vein selvages, intervals of quartz intru, FS can be chalk white locally.
93	96	14458	Felsic Feldspar Porphyry	SAA (FP#1), increasing vein density, start to see more KSP alt on vein selvages, intervals of quartz intru, FS can be chalk white locally.
96	99	14622	Felsic Feldspar Porphyry	SAA (FP#1), increasing vein density, start to see more KSP alt on vein selvages, intervals of quartz intru, FS can be chalk white locally. @98.5-99.2 low angle tca qu
99	102		Felsic Feldspar Porphyry	SAA (FP#1), increasing vein density, start to see more KSP alt on vein selvages, intervals of quartz intru, FS can be chalk white locally.
102	105	14459	Felsic Feldspar Porphyry	SAA (FP#1), Increasing vein density with more KSP on vein selvages, intervals of qtz intru +/- vuggy qtz veins with sub-eu py within.
105	108	14460	Felsic Feldspar Porphyry	SAA (FP#1), Increasing vein density with more KSP on vein selvages, intervals of qtz intru +/- vuggy qtz veins with sub-eu py within.
108	111		Felsic Feldspar Porphyry	SAA (FP#1), Increasing vein density with more KSP on vein selvages, intervals of qtz intru +/- vuggy qtz veins with sub-eu py within. @ 109.9 - Fault Gouge ~ 10 cm Chl+Ser
111	114	14623	Felsic Feldspar Porphyry	SAA (FP#1), Increasing vein density with more KSP on vein selvages, intervals of qtz intru +/- vuggy qtz veins with sub-eu py within.
114	117	14462	Felsic Feldspar Porphyry	SAA (FP#1), Increasing vein density with more KSP on vein selvages, intervals of qtz intru +/- vuggy qtz veins with sub-eu py within.
117	120		Felsic Feldspar Porphyry	SAA (FP#1), Increasing vein density with more KSP on vein selvages, intervals of qtz intru +/- vuggy qtz veins with sub-eu py within.
120	123	14624	Felsic Feldspar Porphyry	SAA (FP#1), Increasing vein density with more KSP on vein selvages, intervals of qtz intru +/- vuggy qtz veins with sub-eu py within.
123	126		Felsic Feldspar Porphyry	SAA (FP#1), Increasing vein density with more KSP on vein selvages, intervals of qtz intru +/- vuggy qtz veins with sub-eu py within.
126	129		Felsic Feldspar Porphyry	SAA (FP#1), Increasing vein density with more KSP on vein selvages, intervals of qtz intru +/- vuggy qtz veins with sub-eu py within.
129	132		Felsic Feldspar Porphyry	SAA (FP#1), Increasing vein density with more KSP on vein selvages, intervals of qtz intru +/- vuggy qtz veins with sub-eu py within. @ 129-129.7 - Fault, ser +/- chl, Sx, chalky FS
132	135	14463	Felsic Feldspar Porphyry	SAA (FP#1)
135	138		Felsic Feldspar Porphyry	SAA (FP#1)
138	141	14464	Felsic Feldspar Porphyry	SAA (FP#1), Increasing vein density with more KSP on vein selvages, intervals of qtz intru +/- vuggy qtz veins with sub-eu py within. @ 140 - Fault gouge & chalky FS adjacent to Fault
141	144	14465	Felsic Feldspar Porphyry	SAA (FP#1)

Interval		Sample	Lithology	Description
From	To	Number		
144	147	14466	Felsic Feldspar Porphyry	SAA (FP#1)
147	150	14467	Felsic Feldspar Porphyry	SAA (FP#1)
150	153	14468	Felsic Feldspar Porphyry	SAA (FP#1)
153	156	14469	Felsic Feldspar Porphyry	SAA (FP#1)
156	156.97	14470	Felsic Feldspar Porphyry	SAA (FP#1)
156.97	159	14472	Eagle Granodiorite	SAA (GD) 40/50* TCA upper/lower contacts
159	162	14626	Eagle Granodiorite	SAA (GD) 40/50* TCA upper/lower contacts
162	165.55	14627	Eagle Granodiorite	SAA (GD) 40/50* TCA upper/lower contacts
165.55	168	14473	Felsic Feldspar Porphyry	SAA (FP#1)
168	171	14474	Felsic Feldspar Porphyry	SAA (FP#1)
171	174	14475	Felsic Feldspar Porphyry	SAA (FP#1)
174	177	14476	Felsic Feldspar Porphyry	SAA (FP#1)
177	180	14477	Felsic Feldspar Porphyry	SAA (FP#1)
180	181.16	14478	Felsic Feldspar Porphyry	SAA (FP#1)
181.16	183	14479	Felsic Feldspar Porphyry	Chocolate brown aphanitic SiO2 rich groundmass with 1-5% 1-3mm biotite books and 5-10 % 1-5 mm blue-cored white rimmed glomeroblasts (feldspars?). Can be "crossed" (intergrowths?). BARREN. Can be microfractured with calcite veins.
183	186		Felsic Feldspar Porphyry	SAA (FP#2)
186	189		Felsic Feldspar Porphyry	SAA (FP#2)
189	192		Felsic Feldspar Porphyry	SAA (FP#2)
192	195		Felsic Feldspar Porphyry	SAA (FP#2)
195	198		Felsic Feldspar Porphyry	SAA (FP#2)
198	201		Felsic Feldspar Porphyry	SAA (FP#2)
201	204		Felsic Feldspar Porphyry	SAA (FP#2)
204	207		Felsic Feldspar Porphyry	SAA (FP#2)
207	210		Felsic Feldspar Porphyry	SAA (FP#2)
210	213		Felsic Feldspar Porphyry	SAA (FP#2)
213	216		Felsic Feldspar Porphyry	SAA (FP#2)
216	218		Felsic Feldspar Porphyry	SAA (FP#2)
218	220.4	14480	Felsic Feldspar Porphyry	SAA (FP#2)
220.4	222	14482	Felsic Feldspar Porphyry	SAA (FP#2) Groundmass becomes green = contact allteration?
222	224.25	14483	Felsic Feldspar Porphyry	SAA (FP#2) Groundmass becomes green = contact allteration?
224.25	225	14484	Felsic Feldspar Porphyry	Plagioclase Porphyry w/ 10-15 % biotite. Massive, unfoliated with 1 % Cpy disseminated throughout. Veins commonly contain KSP alteration selvages and appears to be getting more pervasively ser/chl altered with depth
225	228	14485	Felsic Feldspar Porphyry	Plagioclase Porphyry w/ 10-15 % biotite. Massive, unfoliated with 1 % Cpy disseminated throughout. Veins commonly contain KSP alteration selvages and appears to be getting more pervasively ser/chl altered with depth

Interval		Sample	Lithology	Description
From	To	Number		
228	231	14486	Felsic Feldspar Porphyry	Plagioclase Porphyry w/ 10-15 % biotite. Massive, unfoliated with 1 % Cpy disseminated throughout. Veins commonly contain KSP alteration selvages and appears to be getting more pervasively ser/chl altered with depth
231	234	14487	Felsic Feldspar Porphyry	Plagioclase Porphyry w/ 10-15 % biotite. Massive, unfoliated with 1 % Cpy disseminated throughout. Veins commonly contain KSP alteration selvages and appears to be getting more pervasively ser/chl altered with depth
234	237	14558	Felsic Feldspar Porphyry	Plagioclase Porphyry w/ 10-15 % biotite. Massive, unfoliated with 1 % Cpy disseminated throughout. Veins commonly contain KSP alteration selvages and appears to be getting more pervasively ser/chl altered with depth
237	240	14559	Felsic Feldspar Porphyry	Plagioclase Porphyry w/ 10-15 % biotite. Massive, unfoliated with 1 % Cpy disseminated throughout. Veins commonly contain KSP alteration selvages and appears to be getting more pervasively ser/chl altered with depth
240	243	14560	Felsic Feldspar Porphyry	Plagioclase Porphyry w/ 10-15 % biotite. Massive, unfoliated with 1 % Cpy disseminated throughout. Veins commonly contain KSP alteration selvages and appears to be getting more pervasively ser/chl altered with depth
243	246	14561	Felsic Feldspar Porphyry	Plagioclase Porphyry w/ 10-15 % biotite. Massive, unfoliated with 1 % Cpy disseminated throughout. Veins commonly contain KSP alteration selvages and appears to be getting more pervasively ser/chl altered with depth
246	249	14562	Felsic Feldspar Porphyry	Plagioclase Porphyry w/ 10-15 % biotite. Massive, unfoliated with 1 % Cpy disseminated throughout. Veins commonly contain KSP alteration selvages and appears to be getting more pervasively ser/chl altered with depth
249	252	14563	Felsic Feldspar Porphyry	Plagioclase Porphyry w/ 10-15 % biotite. Massive, unfoliated with 1 % Cpy disseminated throughout. Veins commonly contain KSP alteration selvages and appears to be getting more pervasively ser/chl altered with depth
252	255	14564	Felsic Feldspar Porphyry	Plagioclase Porphyry w/ 10-15 % biotite. Massive, unfoliated with 1 % Cpy disseminated throughout. Veins commonly contain KSP alteration selvages and appears to be getting more pervasively ser/chl altered with depth
255	258	14565	Felsic Feldspar Porphyry	Plagioclase Porphyry w/ 10-15 % biotite. Massive, unfoliated with 1 % Cpy disseminated throughout. Veins commonly contain KSP alteration selvages and appears to be getting more pervasively ser/chl altered with depth
258	259.75	14566	Felsic Feldspar Porphyry	Plagioclase Porphyry w/ 10-15 % biotite. Massive, unfoliated with 1 % Cpy disseminated throughout. Veins commonly contain KSP alteration selvages and appears to be getting more pervasively ser/chl altered with depth
259.75	261	14567	Eagle Granodiorite	Foliated Biotite Granodiorite. Slight to moderate sericite alteration, with diss. Sx throughout. Lower interval +/- intruded by PEG dykes. Vein density decreases with depth.
261	264	14568	Eagle Granodiorite	Foliated Biotite Granodiorite. Slight to moderate sericite alteration, with diss. Sx throughout. Lower interval +/- intruded by PEG dykes. Vein density decreases with depth.
264	267	14569	Eagle Granodiorite	Foliated Biotite Granodiorite. Slight to moderate sericite alteration, with diss. Sx throughout. Lower interval +/- intruded by PEG dykes. Vein density decreases with depth.

Interval		Sample	Lithology	Description
From	To	Number		
267	270	14571	Eagle Granodiorite	Foliated Biotite Granodiorite. Slight to moderate sericite alteration, with diss. Sx throughout. Lower interval +/- intruded by PEG dykes. Vein density decreases with depth.
270	273	14572	Eagle Granodiorite	Foliated Biotite Granodiorite. Slight to moderate sericite alteration, with diss. Sx throughout. Lower interval +/- intruded by PEG dykes. Vein density decreases with depth.
273	276	14573	Eagle Granodiorite	Foliated Biotite Granodiorite. Slight to moderate sericite alteration, with diss. Sx throughout. Lower interval +/- intruded by PEG dykes. Vein density decreases with depth.

Hole	SP-19-04
Easting	624422
Northing	5531000
Azimuth	130°
Dip	-45
Depth	266
Start	June 14, 2019
End	June 18, 2019
Logger	Steven Kramar

Interval		Sample	Lithology	Description
From	To	Number		
0	6	N/A	Overburden	No Recovery, Overburden/Casing
6	8	14488	Eagle Granodiorite	Foliated biotite granodiorite. Preferential fabric defined by biotite. Core is blocky with abundant fractures w/ ox. Trace malachite on fracture surfaces. Diss magnetite ubiquootous throughout?
8	11	14489	Eagle Granodiorite	SAA (GD) Rubbly oxidized broken core.
11	14	14490	Eagle Granodiorite	SAA (GD) Rubbly oxidized broken core.
14	17	14491	Eagle Granodiorite	SAA (GD) Rubbly oxidized broken core.
17	20	14492	Eagle Granodiorite	SAA (GD) Rubbly oxidized broken core.
20	23	14493	Eagle Granodiorite	SAA (GD) Rubbly oxidized broken core.
23	26	14494	Eagle Granodiorite	SAA (GD) Rubbly oxidized broken core.
26	29	14496	Eagle Granodiorite	SAA (GD) Rubbly oxidized broken core.
29	32	14497	Eagle Granodiorite	SAA (GD) Rubbly oxidized broken core.
32	35	14498	Eagle Granodiorite	SAA (GD) Rubbly oxidized broken core.
35	38		Eagle Granodiorite	SAA (GD) Rubbly oxidized broken core.
38	41		Eagle Granodiorite	SAA (GD) core becoming more competant, less oxidation, veins are starting to have sx + ox+sx. Locally, FS can be "chalky". Magnetite either ubiquotous throughout, or micro fracture controlled(?)
41	44		Eagle Granodiorite	SAA (GD) core becoming more competant, less oxidation, veins are starting to have sx + ox+sx. Locally, FS can be "chalky". Magnetite either ubiquotous throughout, or micro fracture controlled(?)
44	47	14499	Eagle Granodiorite	SAA (GD) core becoming more competant, less oxidation, veins are starting to have sx + ox+sx. Locally, FS can be "chalky". Magnetite either ubiquotous throughout, or micro fracture controlled(?)
47	50		Eagle Granodiorite	SAA (GD) core becoming more competant, less oxidation, veins are starting to have sx + ox+sx. Locally, FS can be "chalky". Magnetite either ubiquotous throughout, or micro fracture controlled(?)
50	53		Eagle Granodiorite	SAA (GD) core becoming more competant, less oxidation, veins are starting to have sx + ox+sx. Locally, FS can be "chalky". Magnetite either ubiquotous throughout, or micro fracture controlled(?)
53	56	14500	Eagle Granodiorite	Mislatch. Patches of (~1 mm)of strongly oxidized rims f py "rusty" veins and a large ~1-3 cm QTZ pheno in SiO2 matrix with KSP selvage (Hydro-Breccia?!)
56	59.15	14501	Eagle Granodiorite	SAA (GD) Strong sericite alteration adjacent to lower contact. No Visible Sx.
59.15	62	14502	Felsic Feldspar Porphyry	Fine grained grey groundmass with 10-20 % 5mm-1 cm felspar phenocrysts, brown/orange oxidation on fracture surfaces. Abundant tight "rusty" veins in upper portion
62	65	14503	Felsic Feldspar Porphyry	SAA (FP#1)

65	68	14504	Felsic Feldspar Porphyry	SAA (FP#1)
68	71		Felsic Feldspar Porphyry	SAA (FP#1), @ 69.05-69.45 Mafic Dyke, fine grained green groundmass
71	74		Felsic Feldspar Porphyry	SAA (FP#1), @ 74.3 Peg Intru
74	77		Felsic Feldspar Porphyry	SAA (FP#1)
77	77.7	14505	Felsic Feldspar Porphyry	SAA (FP#1)
77.7	80	14506	Felsic Feldspar Porphyry	SAA (FP#1)
80	83		Felsic Feldspar Porphyry	SAA (FP#1)
83	86	14507	Felsic Feldspar Porphyry	SAA (FP#1), @ 85.4 m, 10 cm green chl/ser fault gouge
86	89	14508	Felsic Feldspar Porphyry	SAA (FP#1)
89	90.3	14509	Felsic Feldspar Porphyry	SAA (FP#1), Faulted
90.3	91.3	14511	Felsic Feldspar Porphyry	SAA (FP#1), Faulted, chilled contact w/ GD
91.3	92	14512	Eagle Granodiorite	SAA (GD) Intruded/Altered by PEG intru near upper contact. Oxidized fractures becoming less abundant with depth.
92	95.2	14513	Eagle Granodiorite	SAA (GD) Intruded/Altered by PEG intru near upper contact. Oxidized fractures becoming less abundant with depth.
95.2	96	14514	Eagle Granodiorite	SAA (GD) Intruded/Altered by PEG intru near upper contact. Oxidized fractures becoming less abundant with depth.
96	98	14515	Eagle Granodiorite	SAA (GD) FS are becoming "chalky" & fractures are oxidized/veins have un-ox sx. Magnetite throughout
98	101	14516	Eagle Granodiorite	SAA (GD) FS are becoming "chalky" & fractures are oxidized/veins have un-ox sx. Magnetite throughout
101	104	14517	Eagle Granodiorite	SAA (GD) FS are becoming "chalky" & fractures are oxidized/veins have un-ox sx. Magnetite throughout
104	107	14518	Eagle Granodiorite	SAA (GD) Veins are generally Qtz + Sx + ox but no KSP alteration on vein selvages. Few strong Ox brown hairline veins.
107	110		Eagle Granodiorite	SAA (GD) Veins are generally Qtz + Sx + ox but no KSP alteration on vein selvages. Few strong Ox brown hairline veins.
110	113		Eagle Granodiorite	SAA (GD) Veins are generally Qtz + Sx + ox but no KSP alteration on vein selvages. Few strong Ox brown hairline veins.
113	116		Eagle Granodiorite	SAA (GD) Aplite Dyke, 10 cm
116	119	14519	Eagle Granodiorite	SAA (GD) Veins are generally Qtz + Sx + ox but no KSP alteration on vein selvages. Few strong Ox brown hairline veins.
119	122		Eagle Granodiorite	SAA (GD) Veins are generally Qtz + Sx + ox but no KSP alteration on vein selvages. Few strong Ox brown hairline veins.
122	123		Eagle Granodiorite	SAA (GD) Veins are generally Qtz + Sx + ox but no KSP alteration on vein selvages. Few strong Ox brown hairline veins.
123	127.5		Mafic Dyke	Dark Green aphanitic groundmass with 5 % 1-5 mm biotite phenocrysts.
127.5	128		Eagle Granodiorite	SAA (GD)
128	131		Eagle Granodiorite	SAA (GD)
131	134		Eagle Granodiorite	SAA (GD) Alteration increases?
134	137		Eagle Granodiorite	SAA (GD) Alteration increases?
137	138.75		Eagle Granodiorite	SAA (GD) Alteration increases?
138.75	142		Mafic Dyke	Dark Green aphanitic groundmass with 5 % 1-5 mm biotite phenocrysts.
142	143		Eagle Granodiorite	SAA (GD) Alteration increases?
143	146		Eagle Granodiorite	SAA (GD) Alteration increases?
146	149		Eagle Granodiorite	SAA (GD) Alteration increases?
149	152		Eagle Granodiorite	SAA (GD) Alteration increases?
152	155		Eagle Granodiorite	SAA (GD) Alteration increases?
155	158		Eagle Granodiorite	SAA (GD) Alteration increases?
158	161		Eagle Granodiorite	SAA (GD) Alteration increases?
161	164		Felsic Feldspar Porphyry	SAA (FP#1), with intervals of "dropped block" GD interfingered within this unit
164	167		Felsic Feldspar Porphyry	SAA (FP#1), with intervals of "dropped block" GD interfingered within this unit
167	169.3		Felsic Feldspar Porphyry	SAA (FP#1), with intervals of "dropped block" GD interfingered within this unit

169.3	170		Eagle Granodiorite	GD (SAA)
170	173	14520	Eagle Granodiorite	GD (SAA)
173	173.7	14521	Eagle Granodiorite	GD (SAA)
173.7	176	14522	Eagle Granodiorite	GD Host intruded by mafic dyke and (?) subsequently intruded by an aplitic/lamphophere dyke
176	179	14523	Eagle Granodiorite	SAA (GD) Veined wth numerous hairline veins with qtz, sx, chl, ksp, magnetite and malachite on fracture surfaces. Appears to be an interfingered FP/GD interval adjacent to the MD contact.
179	182	14524	Eagle Granodiorite	SAA (GD) Veined wth numerous hairline veins with qtz, sx, chl, ksp, magnetite and malachite on fracture surfaces. Appears to be an interfingered FP/GD interval adjacent to the MD contact.
182	185.3	14526	Eagle Granodiorite	SAA (GD) Veined wth numerous hairline veins with qtz, sx, chl, ksp, magnetite and malachite on fracture surfaces. Appears to be an interfingered FP/GD interval adjacent to the MD contact.
185.3	186.9		Mafic Dyke	SAA (MD) Broken/Obscure contacts
186.9	188	14527	Eagle Granodiorite	SAA (GD)
188	191	14528	Eagle Granodiorite	SAA (GD)
191	194	14529	Eagle Granodiorite	SAA (GD)
194	197	14530	Eagle Granodiorite	SAA (GD)
197	200	14531	Eagle Granodiorite	SAA (GD)
200	203	14532	Eagle Granodiorite	SAA (GD)
203	205	14533	Eagle Granodiorite	SAA (GD)
205	206.4		Mafic Dyke	SAA (MD) Broken/Obscure contacts
206.4	209	14534	Eagle Granodiorite	SAA (GD) Pervassive Alteration increases?
209	212	14535	Eagle Granodiorite	SAA (GD) Pervassive Alteration increases?
212	215	14536	Eagle Granodiorite	SAA (GD) Pervassive Alteration increases?
215	218	14537	Eagle Granodiorite	SAA (GD) Pervassive Alteration increases?
218	221	14538	Eagle Granodiorite	SAA (GD) Pervassive Alteration increases?
221	224	14539	Eagle Granodiorite	SAA (GD) Pervassive Alteration increases?
224	227	14541	Eagle Granodiorite	SAA (GD) Pervassive Alteration increases?
227	230	14542	Eagle Granodiorite	SAA (GD) Pervassive Alteration increases?
230	233	14543	Eagle Granodiorite	SAA (GD) Pervassive Alteration increases?
233	236	14544	Eagle Granodiorite	SAA (GD) Pervassive Alteration increases?
236	239	14545	Eagle Granodiorite	SAA (GD) Pervassive Alteration increases?
239	242	14546	Eagle Granodiorite	Could be strongly hydrotherm. Altered GD or a separate unit on its own? (?!). Fabric seems to weaken, mafic mineral conc. Increases, diss. Py+Cyp throughout. BORNITE on frac. Surfaces. Mag diss throuhgout
242	245	14547	Eagle Granodiorite	Could be strongly hydrotherm. Altered GD or a separate unit on its own? (?!). Fabric seems to weaken, mafic mineral conc. Increases, diss. Py+Cyp throughout. BORNITE on frac. Surfaces. Mag diss throuhgout
245	248	14548	Eagle Granodiorite	Could be strongly hydrotherm. Altered GD or a separate unit on its own? (?!). Fabric seems to weaken, mafic mineral conc. Increases, diss. Py+Cyp throughout. BORNITE on frac. Surfaces. Mag diss throuhgout
248	251	14549	Eagle Granodiorite	Could be strongly hydrotherm. Altered GD or a separate unit on its own? (?!). Fabric seems to weaken, mafic mineral conc. Increases, diss. Py+Cyp throughout. BORNITE on frac. Surfaces. Mag diss throuhgout
251	254	14550	Eagle Granodiorite	SAA (GD) Foliation beomes more apparent, core is "cloudy" grey (as opposed to "fresher" looking GD) = ser alteration?. Sx appear to be vein controlled & diss throughout.

254	257	14551	Eagle Granodiorite	SAA (GD) Foliation beomes more apparent, core is "cloudy" grey (as opposed to "fresher" looking GD) = ser alteration?. Sx appear to be vein controlled & diss throughout.
257	260	14552	Eagle Granodiorite	SAA (GD) Foliation beomes more apparent, core is "cloudy" grey (as opposed to "fresher" looking GD) = ser alteration?. Sx appear to be vein controlled & diss throughout.
260	263	14553	Eagle Granodiorite	SAA (GD) Foliation beomes more apparent, core is "cloudy" grey (as opposed to "fresher" looking GD) = ser alteration?. Sx appear to be vein controlled & diss throughout.
263	264.05	14554	Eagle Granodiorite	SAA (GD) Foliation beomes more apparent, core is "cloudy" grey (as opposed to "fresher" looking GD) = ser alteration?. Sx appear to be vein controlled & diss throughout.
264.05	266	14556	Mafic Dyke	SAA (MD) 60* upper contact tca. 5 cm piece of GD (block?) near the end of the hole

Appendix III
Assay Certificates

MSALABS
Unit 1, 20120 102nd Avenue
Langley, BC V1M 4B4
Phone: +1-604-888-0875

To: **Pacific Ridge Exploration Ltd**
Suite 1100, 1111 Melville Steet
Vancouver, BC V6E 3V6
Canada

TEST REPORT:	**YVR1910426**

Project Name:	Spius_2019_Submission: #1
Job Received Date:	19-Jun-2019
Job Report Date:	30-Jun-2019
Number of Samples:	123
Report Version:	Final

COMMENTS:

Test results reported relate to the tested samples only on an “as received” basis. Unless otherwise stated above, sufficient sample was received for the methods requested and all samples were received in acceptable condition. Analytical results in unsigned reports marked "provisional" are subject to change, pending final QC review and approval. The customer has not provided any information than can affect the validity of the test results. Please refer to MSALABS' Schedule of Services and Fees for our complete Terms and Conditions. Preliminary results are applicable when a portion of samples in a job is 100% completed and reported or 1 of a number of methods on the same job have been completed 100%. Results cannot change, but additional results or results for additional methods can be added.

SAMPLE PREPARATION	
METHOD CODE	DESCRIPTION
PRP-910	Dry, Crush to 70% passing 2mm, Split 250g, Pulverize to 85% passing 75µm

ANALYTICAL METHODS	
METHOD CODE	DESCRIPTION
IMS-128	Multi-Element (39 elements), 20g, 3:1 Aqua Regia, ICP-AES/MS, Ultra Trace Level

Signature:

Ta Han
Spectroscopy/Data Approval Manager
MSALABS

MSALABS
Unit 1, 20120 102nd Avenue
Langley, BC V1M 4B4
Phone: +1-604-888-0875

To: **Pacific Ridge Exploration Ltd**
Suite 1100, 1111 Melville Steet
Vancouver, BC V6E 3V6
Canada

TEST REPORT: YVR1910426

Project Name: Spius_2019_Submission: #1
Job Received Date: 19-Jun-2019
Job Report Date: 30-Jun-2019
Report Version: Final

Sample ID	Sample Type	PWE-100 Rec. Wt. kg 0.01	Method Analyte Units LOR	IMS-128 Ag ppm 0.05	IMS-128 Al % 0.01	IMS-128 As ppm 0.2	IMS-128 Au ppm 0.001	IMS-128 B ppm 10	IMS-128 Ba ppm 10	IMS-128 Bi ppm 0.05	IMS-128 Ca % 0.01	IMS-128 Cd ppm 0.05
Granite Blank	QC-P-BK	--		<0.05	0.90	1.1	<0.001	20	80	<0.05	0.69	<0.05
Granite Blank	QC-P-BK	--		<0.05	0.92	1.0	<0.001	23	75	<0.05	0.68	<0.05
014282	Core	6.07		0.10	0.73	11.5	<0.001	<10	301	0.07	1.59	0.11
014283	Core	6.97		0.12	0.47	5.9	<0.001	<10	204	0.19	0.48	0.05
014284	Core	3.61		0.12	0.29	8.3	<0.001	<10	105	0.05	0.46	0.06
014285	Core	2.50		0.18	0.35	33.2	0.001	<10	197	0.09	1.09	0.13
014286	Core	5.16		0.20	0.68	6.9	<0.001	<10	179	0.06	0.59	0.06
014287	Core	3.85		0.11	0.79	7.6	0.001	<10	300	0.09	0.83	<0.05
014288	Core	4.40		0.08	0.73	6.9	<0.001	<10	223	0.05	0.84	<0.05
014289	Core	4.83		0.16	0.81	6.8	0.001	<10	280	0.08	1.12	0.08
014290	Core	3.93		0.11	0.66	7.5	<0.001	<10	223	0.06	0.84	0.05
014291	Pulp	0.12		2.32	1.88	26.0	0.023	<10	113	1.80	1.06	0.95
014292	Core	4.64		0.08	0.70	10.6	0.001	<10	324	0.06	1.40	0.07
014293	Core	1.78		0.18	0.78	22.7	<0.001	<10	289	0.11	1.88	0.10
014294	Core	5.74		0.32	1.04	83.8	0.002	17	335	0.22	2.43	0.22
014295	Core	7.18		0.24	0.72	57.3	<0.001	<10	254	0.10	1.02	0.09
014296	Core	2.17		0.31	1.01	52.4	0.002	<10	275	0.12	2.42	0.15
014297	Core	2.08		0.10	0.86	17.7	<0.001	<10	229	0.12	1.17	0.06
014298	Core	2.83		0.13	0.76	24.8	<0.001	<10	350	0.14	1.26	0.08
014299	Core	4.68		0.21	0.49	52.7	0.001	<10	176	0.14	0.78	0.07
014300	Core	2.74		0.14	0.28	46.6	<0.001	<10	255	0.09	0.51	0.08
014301	Rock	0.91		<0.05	0.02	0.4	<0.001	<10	12	<0.05	>25	<0.05
014302	Core	4.48		0.36	0.65	56.2	0.001	<10	201	0.19	0.84	0.13
014303	Core	5.32		0.43	0.66	24.7	0.002	21	183	0.27	0.85	0.13
014304	Core	3.79		0.31	0.64	54.0	0.002	<10	188	0.42	1.39	0.09

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To: **Pacific Ridge Exploration Ltd**
Suite 1100, 1111 Melville Steet
Vancouver, BC V6E 3V6
Canada

TEST REPORT: YVR1910426

Project Name: Spius_2019_Submission: #1
Job Received Date: 19-Jun-2019
Job Report Date: 30-Jun-2019
Report Version: Final

Sample ID	Sample Type	PWE-100 Rec. Wt. kg 0.01	Method Analyte Units LOR	IMS-128 Ag ppm 0.05	IMS-128 Al % 0.01	IMS-128 As ppm 0.2	IMS-128 Au ppm 0.001	IMS-128 B ppm 10	IMS-128 Ba ppm 10	IMS-128 Bi ppm 0.05	IMS-128 Ca % 0.01	IMS-128 Cd ppm 0.05
014305	Core	7.36		0.24	0.38	61.7	<0.001	<10	194	0.10	0.78	0.09
014306	Core	6.91		0.21	0.38	67.3	0.001	<10	234	0.18	1.24	0.42
014307	Core	6.06		0.23	0.72	20.4	<0.001	<10	231	0.17	1.64	0.09
014308	Core	8.22		0.32	0.65	38.1	0.001	<10	260	0.36	2.93	0.15
014309	Core	4.87		0.27	0.67	36.7	<0.001	12	195	0.39	3.29	0.13
014310	Core	1.73		0.13	0.68	22.0	<0.001	<10	156	0.38	1.31	0.07
014310PD	QC-PD	--		0.16	0.62	21.0	<0.001	<10	149	0.40	1.29	0.06
014311	Pulp	0.10		1.26	2.02	38.9	0.187	14	66	0.55	1.12	1.10
014312	Core	5.68		0.35	0.47	69.6	0.002	<10	273	0.36	2.40	0.19
014313	Core	4.39		0.19	0.56	33.9	<0.001	<10	230	0.22	1.40	0.11
014314	Core	4.48		0.28	0.57	12.8	0.001	10	151	0.24	0.89	0.08
014315	Core	4.76		0.14	0.65	2.0	<0.001	<10	146	0.28	0.57	0.06
014316	Core	3.45		0.17	0.76	14.5	<0.001	14	232	0.24	1.00	0.07
014317	Core	0.90		0.22	0.48	26.0	<0.001	12	555	<0.05	6.17	0.06
014318	Core	5.41		0.21	0.70	23.9	0.002	13	208	0.22	1.38	0.09
014319	Core	3.51		0.46	0.80	5.6	0.001	12	213	0.23	1.01	0.13
014320	Core	1.73		0.42	1.45	1.3	0.001	19	365	0.21	1.22	0.46
014321	Rock	0.75		<0.05	0.02	0.2	<0.001	<10	12	<0.05	>25	<0.05
014322	Core	4.08		0.11	0.49	12.5	<0.001	12	175	0.17	2.52	0.05
014323	Core	7.35		0.18	0.71	8.0	<0.001	12	220	0.21	0.91	0.08
014324	Core	6.87		0.31	0.81	1.2	0.001	<10	192	0.20	0.66	0.10
014325	Core	9.10		0.23	0.69	2.7	0.002	11	186	0.25	0.74	0.10
014326	Core	3.77		0.13	0.32	19.4	<0.001	<10	211	0.20	0.85	0.08
014327	Core	4.72		0.11	0.48	4.0	<0.001	<10	154	0.25	0.66	0.05
014328	Core	5.47		0.30	0.59	6.9	0.001	<10	158	0.31	0.77	0.12

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To: **Pacific Ridge Exploration Ltd**
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Canada

TEST REPORT: YVR1910426

Project Name: Spius_2019_Submission: #1
Job Received Date: 19-Jun-2019
Job Report Date: 30-Jun-2019
Report Version: Final

Sample ID	Sample Type	PWE-100 Rec. Wt. kg 0.01	Method Analyte Units LOR	IMS-128 Ag ppm 0.05	IMS-128 Al % 0.01	IMS-128 As ppm 0.2	IMS-128 Au ppm 0.001	IMS-128 B ppm 10	IMS-128 Ba ppm 10	IMS-128 Bi ppm 0.05	IMS-128 Ca % 0.01	IMS-128 Cd ppm 0.05
014329	Core	2.62		0.29	0.36	37.8	0.001	<10	204	0.31	0.93	0.22
014330	Core	4.98		0.26	0.47	68.1	0.003	10	203	0.31	1.27	0.15
014331	Core	3.17		0.25	0.63	70.4	0.002	12	172	0.31	1.30	0.15
014332	Core	5.40		0.25	0.49	35.0	0.001	11	222	0.30	0.86	0.20
014333	Core	6.12		0.06	0.46	8.8	<0.001	12	142	0.10	0.76	<0.05
014334	Core	3.93		0.06	0.49	14.7	0.001	12	148	0.23	1.46	0.07
014335	Core	6.38		0.07	0.60	8.3	<0.001	<10	171	0.11	1.05	0.06
014336	Pulp	0.10		2.40	1.96	25.8	0.022	13	99	1.91	1.10	0.93
014337	Core	5.57		0.13	0.80	2.2	<0.001	<10	234	0.16	0.74	0.17
014338	Core	4.88		0.27	0.92	1.1	0.001	10	213	0.23	0.68	0.29
014339	Core	3.67		0.09	0.42	1.3	<0.001	<10	141	0.14	0.51	0.08
014340	Core	4.45		0.18	0.46	2.0	<0.001	<10	108	0.16	0.42	0.10
014341	Core	5.00		0.11	0.48	1.2	<0.001	<10	137	0.13	0.56	0.07
014342	Core	4.45		0.10	0.53	1.2	<0.001	10	114	0.12	0.46	<0.05
014343	Core	3.75		0.10	0.44	2.2	<0.001	<10	102	0.23	0.45	0.07
014344	Core	3.68		0.21	0.38	9.8	<0.001	11	157	0.25	0.70	0.14
014345	Core	6.71		0.18	0.30	44.1	<0.001	<10	318	0.21	0.92	0.20
014346	Core	5.09		0.22	0.39	14.4	<0.001	<10	160	0.19	0.69	0.16
014347	Core	5.22		0.30	0.38	6.4	0.001	<10	145	0.16	0.54	0.20
014348	Core	5.16		0.12	0.40	4.6	<0.001	<10	169	0.19	0.96	0.12
014349	Core	5.25		0.21	0.49	3.5	0.003	<10	144	0.27	0.61	0.19
014350	Core	5.09		0.08	0.50	5.2	<0.001	<10	175	0.10	0.70	0.07
014351	Rock	1.60		<0.05	0.02	0.2	<0.001	<10	10	<0.05	>25	<0.05
014352	Core	4.77		0.06	0.46	4.8	<0.001	<10	151	0.13	0.85	0.24
014353	Core	5.05		0.06	0.52	12.0	<0.001	<10	213	0.10	0.89	0.16

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TEST REPORT: YVR1910426

Project Name: Spius_2019_Submission: #1
Job Received Date: 19-Jun-2019
Job Report Date: 30-Jun-2019
Report Version: Final

Sample ID	Sample Type	PWE-100 Rec. Wt. kg 0.01	Method Analyte Units LOR	IMS-128 Ag ppm 0.05	IMS-128 Al % 0.01	IMS-128 As ppm 0.2	IMS-128 Au ppm 0.001	IMS-128 B ppm 10	IMS-128 Ba ppm 10	IMS-128 Bi ppm 0.05	IMS-128 Ca % 0.01	IMS-128 Cd ppm 0.05
014354	Core	4.91		0.16	0.47	26.8	0.001	<10	182	0.10	0.70	0.12
014355	Core	2.76		0.09	0.45	9.7	<0.001	<10	166	0.10	0.87	0.09
014356	Core	4.87		0.09	0.33	32.9	0.001	<10	301	0.09	1.01	0.11
014357	Core	3.49		0.35	0.48	38.1	0.002	<10	231	0.16	0.99	0.20
014358	Core	4.89		0.11	0.45	4.8	0.001	<10	219	0.19	0.73	0.06
014359	Core	4.86		0.38	1.06	78.8	0.002	11	243	0.22	1.18	0.18
014360	Core	5.09		0.14	0.88	25.1	<0.001	<10	286	0.15	1.02	0.09
014361	Core	5.43		0.31	1.04	47.5	0.003	<10	257	0.24	0.98	0.16
014362	Core	5.53		0.23	0.96	11.3	0.002	<10	301	0.18	0.98	0.13
014363	Core	5.09		0.18	0.99	8.9	<0.001	<10	307	0.15	1.16	0.14
014364	Core	4.88		0.21	0.88	3.5	0.001	<10	218	0.16	0.83	0.13
014364PD	QC-PD	--		0.20	0.83	3.2	0.001	<10	205	0.16	0.82	0.14
014365	Pulp	0.10		1.19	2.39	41.0	0.182	<10	69	0.56	1.21	1.15
014366	Core	5.55		0.45	0.99	7.9	0.002	<10	247	0.23	0.85	0.18
014367	Core	4.44		0.18	0.96	11.3	0.002	<10	300	0.18	1.23	0.17
014368	Core	4.45		0.24	0.94	17.5	0.002	<10	257	0.18	0.88	0.16
014369	Core	4.88		0.16	0.93	3.9	0.001	<10	218	0.25	0.93	0.27
014370	Core	5.15		0.40	1.08	1.1	0.003	<10	233	0.23	0.86	0.20
014371	Rock	1.62		<0.05	0.02	0.2	<0.001	<10	<10	<0.05	>25	<0.05
014372	Core	5.15		0.32	1.23	1.8	0.002	<10	202	0.23	0.58	0.24
014373	Core	5.31		0.13	1.17	1.8	0.001	<10	207	0.10	0.52	0.06
014374	Core	5.03		0.13	1.16	1.5	<0.001	<10	240	0.22	0.54	0.09
014375	Core	4.70		0.14	1.28	1.0	0.001	<10	249	0.10	0.52	0.10
014376	Core	5.09		0.16	1.11	1.1	0.001	<10	266	0.11	0.60	0.05
014377	Core	5.32		0.27	1.10	0.9	0.001	<10	255	0.11	0.58	0.14

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TEST REPORT: YVR1910426

Project Name: Spius_2019_Submission: #1
Job Received Date: 19-Jun-2019
Job Report Date: 30-Jun-2019
Report Version: Final

Sample ID	Sample Type	PWE-100 Rec. Wt. kg 0.01	Method Analyte Units LOR	IMS-128 Ag ppm 0.05	IMS-128 Al % 0.01	IMS-128 As ppm 0.2	IMS-128 Au ppm 0.001	IMS-128 B ppm 10	IMS-128 Ba ppm 10	IMS-128 Bi ppm 0.05	IMS-128 Ca % 0.01	IMS-128 Cd ppm 0.05
014378	Core	3.03		0.26	1.07	18.5	0.001	<10	129	0.15	1.66	0.30
014379	Core	6.09		0.24	1.41	31.3	0.002	<10	279	0.19	1.81	0.20
014380	Core	4.22		0.24	1.26	1.4	0.002	<10	294	0.14	1.06	0.11
014381	Pulp	0.10		2.37	2.23	26.9	0.024	<10	101	1.91	1.17	0.98
014382	Core	4.89		0.17	1.23	1.2	0.002	<10	238	0.12	0.69	0.06
014383	Core	5.37		0.38	1.26	2.7	0.002	<10	179	0.19	0.89	0.16
014384	Core	5.22		0.32	1.28	1.5	0.002	<10	218	0.23	0.80	0.16
014385	Core	5.75		0.22	1.18	1.5	0.002	<10	183	0.25	0.75	0.15
014386	Core	4.14		0.15	1.05	1.0	<0.001	<10	174	0.13	0.51	0.05
014387	Core	5.24		0.20	1.30	5.1	0.001	<10	223	0.20	0.84	0.10
014388	Core	4.78		0.25	1.04	2.0	0.002	<10	185	0.16	0.75	0.10
014389	Core	5.91		0.36	1.22	2.2	0.003	<10	197	0.19	0.79	0.11
014390	Core	4.80		0.31	1.13	35.3	0.003	<10	242	0.24	1.53	0.12
014391	Rock	1.41		<0.05	0.02	0.2	<0.001	<10	<10	<0.05	18.86	<0.05
014392	Core	5.15		0.13	0.61	22.7	0.001	<10	190	0.28	1.18	0.07
014393	Core	4.77		0.28	0.97	6.8	0.003	<10	165	0.19	0.90	0.17
014394	Core	4.84		0.18	0.76	8.2	0.002	<10	173	0.17	1.06	0.19
014395	Core	4.89		0.15	1.05	14.6	0.001	<10	285	0.11	1.03	0.09
014396	Core	4.99		0.33	0.88	42.4	0.002	<10	223	0.13	1.28	0.14
014397	Core	5.33		0.30	1.01	31.4	0.002	<10	235	0.21	1.65	0.22
014398	Core	5.44		0.12	0.66	28.7	<0.001	<10	173	0.25	1.25	0.08
014399	Core	5.46		0.19	0.56	43.5	0.002	<10	101	0.50	1.23	0.27
014400	Core	4.70		0.11	0.73	7.5	0.001	<10	115	0.53	0.79	0.08
014400PD	QC-PD	--		0.12	0.79	8.9	0.002	<10	121	0.53	0.81	0.08
014401	Pulp	0.13		1.20	2.30	40.1	0.189	<10	66	0.55	1.16	1.14

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TEST REPORT: YVR1910426

Project Name: Spius_2019_Submission: #1
Job Received Date: 19-Jun-2019
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Sample ID	Sample Type	PWE-100 Rec. Wt. kg 0.01	Method Analyte Units LOR	IMS-128 Ag ppm 0.05	IMS-128 Al % 0.01	IMS-128 As ppm 0.2	IMS-128 Au ppm 0.001	IMS-128 B ppm 10	IMS-128 Ba ppm 10	IMS-128 Bi ppm 0.05	IMS-128 Ca % 0.01	IMS-128 Cd ppm 0.05
014402	Core	5.13		0.14	0.70	15.7	0.001	<10	207	0.16	1.07	0.27
014403	Core	5.08		0.11	0.74	2.2	0.001	<10	125	0.30	0.66	0.24
014404	Core	4.91		0.14	0.83	1.6	0.001	<10	145	0.17	0.70	0.10
DUP 014292				0.07	0.72	10.5	<0.001	<10	316	0.06	1.35	0.08
DUP 014316				0.17	0.79	14.5	0.001	<10	221	0.25	1.01	0.07
DUP 014352				0.06	0.48	4.8	<0.001	<10	158	0.13	0.84	0.22
STD BLANK				<0.05	<0.01	<0.2	<0.001	<10	<10	<0.05	<0.01	<0.05
STD BLANK				<0.05	<0.01	<0.2	<0.001	<10	<10	<0.05	<0.01	<0.05
STD BLANK				<0.05	<0.01	<0.2	<0.001	<10	<10	<0.05	<0.01	<0.05
STD OREAS 25a				<0.05	5.99	3.2	<0.001	14	60	0.28	0.16	<0.05
STD OREAS 600				25.63	1.07	83.9	0.207	<10	68	7.13	1.80	3.63
STD OREAS 25a				<0.05	5.87	2.9	0.001	<10	60	0.30	0.17	<0.05

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TEST REPORT: YVR1910426

Project Name: Spius_2019_Submission: #1
Job Received Date: 19-Jun-2019
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Sample ID	IMS-128 Co ppm 0.1	IMS-128 Cr ppm 1	IMS-128 Cu ppm 0.2	IMS-128 Fe % 0.01	IMS-128 Ga ppm 0.1	IMS-128 Hg ppm 0.01	IMS-128 K % 0.01	IMS-128 La ppm 0.5	IMS-128 Mg % 0.01	IMS-128 Mn ppm 5	IMS-128 Mo ppm 0.05	IMS-128 Na % 0.01
Granite Blank	3.7	46	4.0	1.78	4.0	<0.01	0.12	6.2	0.49	517	2.21	0.14
Granite Blank	3.6	48	4.8	1.80	4.1	<0.01	0.12	6.1	0.51	513	2.24	0.14
014282	2.9	56	226.5	1.43	3.5	0.13	0.27	6.2	0.46	627	5.35	0.11
014283	1.9	66	181.6	0.96	2.8	0.02	0.23	8.5	0.19	264	3.35	0.12
014284	0.8	79	201.1	0.32	1.2	0.06	0.13	0.5	0.07	114	11.75	0.11
014285	1.3	65	353.3	0.53	1.4	0.12	0.12	1.1	0.17	254	18.37	0.10
014286	3.3	49	391.8	1.64	4.2	0.03	0.32	9.5	0.36	357	4.09	0.13
014287	3.9	54	188.7	1.70	4.4	0.04	0.40	6.6	0.37	444	4.58	0.13
014288	4.1	50	146.1	1.65	3.9	0.04	0.36	6.7	0.40	379	2.85	0.13
014289	5.9	46	307.0	2.17	4.3	0.01	0.42	8.4	0.54	509	1.70	0.14
014290	4.3	45	264.5	1.87	3.9	<0.01	0.32	8.1	0.42	433	4.80	0.14
014291	32.8	186	3565.5	3.73	6.4	0.06	1.10	7.6	2.38	273	253.34	0.08
014292	4.0	39	105.4	1.77	3.6	0.01	0.32	5.7	0.43	564	10.97	0.11
014293	4.8	31	271.8	1.80	3.6	0.02	0.24	5.1	0.47	528	3.01	0.09
014294	8.9	38	679.0	3.14	5.4	0.16	0.45	7.0	0.85	755	7.33	0.08
014295	4.6	44	554.2	1.80	3.9	0.01	0.32	8.7	0.43	383	2.58	0.12
014296	9.6	34	765.9	3.29	6.1	0.01	0.43	22.3	0.89	648	3.73	0.13
014297	6.7	34	224.2	2.52	5.3	<0.01	0.39	13.6	0.58	507	2.42	0.13
014298	4.6	49	224.8	1.83	3.8	<0.01	0.27	6.8	0.34	414	8.02	0.12
014299	3.4	47	396.2	1.18	2.4	<0.01	0.21	5.0	0.20	264	11.09	0.10
014300	1.0	54	185.3	0.39	1.0	<0.01	0.16	1.2	0.08	120	8.72	0.10
014301	0.2	11	0.7	0.07	<0.1	<0.01	<0.01	1.4	0.67	107	0.12	<0.01
014302	4.3	45	665.4	1.53	3.4	<0.01	0.29	6.8	0.33	329	4.37	0.12
014303	5.4	43	917.2	1.80	3.2	<0.01	0.30	6.9	0.35	344	10.96	0.10
014304	4.4	46	812.6	1.61	3.2	0.01	0.27	9.2	0.47	415	5.20	0.11

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To: **Pacific Ridge Exploration Ltd**
Suite 1100, 1111 Melville Steet
Vancouver, BC V6E 3V6
Canada

TEST REPORT: YVR1910426

Project Name: Spius_2019_Submission: #1
Job Received Date: 19-Jun-2019
Job Report Date: 30-Jun-2019
Report Version: Final

Sample ID	IMS-128 Co ppm 0.1	IMS-128 Cr ppm 1	IMS-128 Cu ppm 0.2	IMS-128 Fe % 0.01	IMS-128 Ga ppm 0.1	IMS-128 Hg ppm 0.01	IMS-128 K % 0.01	IMS-128 La ppm 0.5	IMS-128 Mg % 0.01	IMS-128 Mn ppm 5	IMS-128 Mo ppm 0.05	IMS-128 Na % 0.01
014305	1.7	53	428.2	0.66	1.7	<0.01	0.17	2.7	0.18	200	27.05	0.10
014306	1.9	44	341.0	0.78	1.6	0.02	0.14	4.3	0.24	274	4.86	0.12
014307	4.6	42	356.7	1.81	3.7	<0.01	0.30	10.0	0.58	522	19.95	0.12
014308	4.4	40	506.0	1.84	3.0	0.01	0.20	8.1	0.58	607	6.34	0.10
014309	4.0	44	382.3	1.73	2.9	0.01	0.21	5.9	0.57	618	5.85	0.09
014310	4.2	46	181.3	1.76	2.7	<0.01	0.20	5.4	0.34	372	2.48	0.10
014310PD	4.2	44	186.8	1.79	2.5	<0.01	0.19	5.4	0.33	372	2.36	0.09
014311	14.4	17	2276.9	4.20	6.0	0.04	0.36	4.3	0.78	715	274.93	0.13
014312	3.2	41	509.6	1.29	2.1	0.03	0.17	4.9	0.40	459	16.84	0.10
014313	2.6	47	270.1	1.38	2.8	0.02	0.20	5.9	0.29	318	7.59	0.11
014314	3.3	48	441.8	1.50	3.3	<0.01	0.23	6.5	0.33	299	19.00	0.12
014315	3.6	48	211.6	1.44	3.9	<0.01	0.24	6.0	0.36	328	19.77	0.13
014316	4.3	51	406.8	1.78	3.8	0.01	0.27	5.8	0.41	404	14.29	0.10
014317	1.5	51	90.9	1.14	1.6	0.01	0.06	3.5	0.41	1140	5.96	0.06
014318	4.6	53	517.6	1.73	3.2	0.02	0.28	6.6	0.38	387	43.22	0.11
014319	5.6	50	677.6	2.05	4.6	<0.01	0.36	7.6	0.50	460	31.66	0.13
014320	10.3	40	678.3	3.46	7.1	<0.01	0.68	3.7	1.01	775	3.44	0.16
014321	0.4	18	4.8	0.13	0.1	<0.01	0.02	1.5	1.85	130	0.61	0.01
014322	3.7	38	188.1	1.45	2.8	0.01	0.23	6.3	0.40	331	3.16	0.08
014323	4.4	53	280.8	1.73	4.1	<0.01	0.34	7.2	0.43	458	11.32	0.12
014324	4.8	62	569.7	1.75	4.7	<0.01	0.34	6.7	0.45	395	15.05	0.13
014325	4.8	58	395.0	1.72	3.8	<0.01	0.29	6.7	0.38	366	9.83	0.11
014326	2.0	103	229.6	1.07	1.6	0.02	0.14	4.3	0.15	191	7.72	0.10
014327	2.5	62	185.2	1.58	2.6	<0.01	0.17	5.4	0.23	275	7.21	0.10
014328	3.8	62	621.6	1.59	3.2	<0.01	0.28	6.2	0.27	320	100.10	0.11

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To: **Pacific Ridge Exploration Ltd**
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Vancouver, BC V6E 3V6
Canada

TEST REPORT: YVR1910426

Project Name: Spius_2019_Submission: #1
Job Received Date: 19-Jun-2019
Job Report Date: 30-Jun-2019
Report Version: Final

Sample ID	IMS-128 Co ppm 0.1	IMS-128 Cr ppm 1	IMS-128 Cu ppm 0.2	IMS-128 Fe % 0.01	IMS-128 Ga ppm 0.1	IMS-128 Hg ppm 0.01	IMS-128 K % 0.01	IMS-128 La ppm 0.5	IMS-128 Mg % 0.01	IMS-128 Mn ppm 5	IMS-128 Mo ppm 0.05	IMS-128 Na % 0.01
014329	2.3	65	438.4	0.89	1.5	0.02	0.18	3.3	0.11	523	28.33	0.09
014330	3.6	119	453.9	1.34	1.8	0.06	0.19	4.2	0.19	272	20.27	0.07
014331	3.7	93	466.8	1.38	2.1	0.06	0.23	4.2	0.20	256	21.13	0.08
014332	2.1	91	455.9	0.98	1.8	0.03	0.19	3.3	0.12	174	29.49	0.09
014333	2.8	95	119.5	1.11	2.3	0.01	0.18	5.0	0.21	294	7.76	0.10
014334	3.6	45	100.8	1.47	2.4	<0.01	0.23	5.1	0.27	379	5.44	0.09
014335	4.0	55	173.2	1.62	3.3	<0.01	0.24	6.5	0.34	474	9.16	0.11
014336	32.4	192	3603.2	3.76	6.7	0.05	1.15	7.9	2.44	285	259.69	0.10
014337	4.4	56	133.5	1.86	4.8	<0.01	0.37	7.6	0.43	462	3.62	0.14
014338	5.8	40	377.9	2.17	5.8	<0.01	0.40	7.0	0.57	497	7.96	0.13
014339	1.7	43	127.3	1.39	3.5	<0.01	0.15	8.0	0.22	308	20.47	0.11
014340	1.9	48	287.2	1.39	3.6	<0.01	0.15	6.3	0.22	298	7.24	0.11
014341	1.7	53	140.3	1.35	3.5	<0.01	0.19	8.5	0.20	309	9.94	0.11
014342	1.8	50	71.3	1.55	4.2	<0.01	0.18	6.1	0.27	331	7.91	0.13
014343	1.5	45	124.9	1.42	3.6	<0.01	0.14	5.5	0.23	294	4.78	0.11
014344	1.6	46	295.7	1.33	2.9	<0.01	0.13	6.7	0.20	317	46.78	0.11
014345	1.1	55	281.3	0.67	1.3	<0.01	0.15	2.5	0.07	360	32.65	0.10
014346	1.4	51	433.4	1.20	2.5	<0.01	0.16	6.3	0.15	522	18.20	0.11
014347	1.3	54	457.7	1.05	2.6	<0.01	0.15	4.7	0.15	389	82.73	0.10
014348	1.4	51	173.5	1.28	2.8	<0.01	0.15	5.5	0.20	319	10.36	0.11
014349	1.8	48	222.8	1.33	3.7	<0.01	0.17	7.2	0.22	299	20.16	0.12
014350	1.6	50	122.2	1.34	3.6	<0.01	0.16	6.2	0.20	300	7.61	0.12
014351	0.3	13	1.1	0.09	0.2	<0.01	0.01	1.6	1.04	118	0.50	<0.01
014352	1.4	37	69.3	1.44	3.2	<0.01	0.17	6.2	0.21	298	6.71	0.10
014353	1.6	79	84.0	1.20	2.6	0.02	0.21	6.5	0.16	328	9.92	0.12

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Vancouver, BC V6E 3V6
Canada

TEST REPORT: YVR1910426

Project Name: Spius_2019_Submission: #1
Job Received Date: 19-Jun-2019
Job Report Date: 30-Jun-2019
Report Version: Final

Sample ID	IMS-128 Co ppm 0.1	IMS-128 Cr ppm 1	IMS-128 Cu ppm 0.2	IMS-128 Fe % 0.01	IMS-128 Ga ppm 0.1	IMS-128 Hg ppm 0.01	IMS-128 K % 0.01	IMS-128 La ppm 0.5	IMS-128 Mg % 0.01	IMS-128 Mn ppm 5	IMS-128 Mo ppm 0.05	IMS-128 Na % 0.01
014354	1.7	76	367.0	1.26	3.0	<0.01	0.19	6.2	0.16	287	40.50	0.12
014355	1.4	76	87.6	1.17	2.6	<0.01	0.17	5.8	0.18	321	2.43	0.11
014356	1.2	78	171.9	0.67	1.3	<0.01	0.16	2.3	0.09	289	22.00	0.11
014357	2.2	79	1007.7	1.26	2.6	<0.01	0.21	6.1	0.13	287	84.04	0.11
014358	1.7	74	188.7	1.29	2.8	<0.01	0.20	6.7	0.15	238	29.80	0.12
014359	2.1	152	710.3	1.35	3.5	0.01	0.33	4.4	0.20	337	87.63	0.10
014360	1.7	137	253.6	1.35	4.0	<0.01	0.28	6.2	0.19	330	5.27	0.15
014361	3.7	143	751.6	1.57	4.5	0.01	0.33	7.0	0.21	411	22.53	0.16
014362	2.3	149	419.2	1.35	4.8	<0.01	0.33	9.5	0.22	409	15.97	0.18
014363	2.1	147	293.4	1.47	4.4	<0.01	0.34	8.6	0.22	381	29.82	0.15
014364	2.3	136	410.1	1.52	4.9	<0.01	0.33	11.9	0.24	437	44.61	0.18
014364PD	2.2	131	381.3	1.49	4.8	<0.01	0.32	11.4	0.24	430	48.75	0.18
014365	14.4	18	2255.9	4.18	6.2	0.02	0.42	4.7	0.80	721	275.21	0.14
014366	3.0	139	854.6	1.68	5.5	<0.01	0.37	11.8	0.25	358	75.92	0.18
014367	2.4	141	443.1	1.60	4.5	0.02	0.30	9.7	0.19	315	16.50	0.15
014368	2.4	145	654.5	1.63	5.1	0.01	0.32	12.3	0.18	303	25.55	0.17
014369	2.4	149	238.4	1.73	5.8	<0.01	0.25	13.7	0.21	379	60.34	0.21
014370	4.4	148	1134.9	1.72	5.2	0.01	0.38	9.2	0.25	316	12.69	0.17
014371	0.2	6	0.9	0.07	0.1	<0.01	<0.01	1.2	1.08	102	0.15	<0.01
014372	5.2	135	775.2	1.98	5.8	<0.01	0.42	5.8	0.49	418	4.59	0.23
014373	4.2	135	159.2	1.66	5.6	<0.01	0.37	4.6	0.44	376	8.28	0.26
014374	3.6	150	196.0	1.72	5.2	<0.01	0.42	6.8	0.38	364	6.30	0.22
014375	4.9	127	272.1	1.98	6.1	<0.01	0.48	4.3	0.52	456	2.39	0.27
014376	4.0	130	136.6	1.64	5.5	<0.01	0.44	4.8	0.41	384	3.44	0.24
014377	4.2	143	531.1	1.61	5.0	<0.01	0.42	3.9	0.39	379	13.14	0.24

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TEST REPORT: YVR1910426

Project Name: Spius_2019_Submission: #1
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014378	2.9	127	363.1	1.34	3.4	0.01	0.28	4.7	0.08	321	12.12	0.12
014379	3.5	111	476.4	1.37	4.4	0.02	0.34	6.8	0.21	480	24.56	0.10
014380	4.2	138	489.0	1.61	5.6	<0.01	0.45	9.2	0.36	397	5.86	0.18
014381	34.6	200	3636.9	3.73	7.1	0.05	1.29	8.9	2.43	273	256.27	0.10
014382	4.7	130	430.6	1.93	6.0	<0.01	0.48	7.5	0.47	359	7.59	0.19
014383	5.1	97	856.6	1.86	5.2	0.01	0.43	7.3	0.49	379	21.04	0.14
014384	4.8	116	572.1	1.99	5.4	<0.01	0.43	5.9	0.54	413	3.96	0.18
014385	4.4	120	467.5	1.76	5.0	<0.01	0.42	7.4	0.41	348	5.19	0.16
014386	4.2	83	313.8	1.77	4.5	<0.01	0.38	3.8	0.50	327	3.58	0.14
014387	4.8	115	398.3	1.93	5.8	<0.01	0.46	7.9	0.50	410	4.80	0.17
014388	3.9	102	405.0	1.63	4.8	<0.01	0.36	6.4	0.48	365	10.85	0.16
014389	4.8	133	579.6	1.84	5.7	<0.01	0.41	7.1	0.48	359	37.86	0.19
014390	4.8	98	701.1	1.94	4.4	0.07	0.39	7.5	0.46	371	53.85	0.11
014391	0.1	6	1.3	0.06	<0.1	<0.01	<0.01	0.9	0.76	72	0.51	<0.01
014392	4.0	55	194.2	1.62	2.5	0.02	0.25	6.8	0.35	393	7.72	0.10
014393	6.0	49	664.4	2.21	4.2	0.01	0.38	6.0	0.64	508	5.34	0.12
014394	4.5	62	333.9	1.74	3.7	<0.01	0.32	7.2	0.47	446	11.74	0.11
014395	5.4	60	326.9	2.17	5.4	0.01	0.42	9.1	0.60	454	14.28	0.14
014396	5.4	55	754.1	2.03	4.3	0.03	0.32	8.8	0.55	408	2.83	0.12
014397	7.6	57	686.7	2.72	4.8	0.01	0.49	9.3	0.82	709	8.55	0.12
014398	5.2	38	235.7	2.13	3.3	0.02	0.26	9.4	0.55	513	11.66	0.12
014399	5.6	42	382.8	2.08	2.1	0.03	0.28	6.1	0.34	351	11.19	0.07
014400	4.9	44	255.3	1.93	2.9	<0.01	0.30	6.9	0.40	418	19.86	0.10
014400PD	5.1	50	261.4	2.01	3.1	<0.01	0.31	7.5	0.42	427	30.47	0.10
014401	14.8	17	2272.4	4.31	6.5	0.02	0.40	4.9	0.80	714	278.92	0.13

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014402	3.8	51	273.6	1.63	3.3	<0.01	0.28	7.5	0.36	403	8.39	0.11
014403	4.4	51	242.9	1.77	3.7	<0.01	0.27	5.7	0.45	463	5.00	0.11
014404	4.7	50	334.0	1.88	4.3	<0.01	0.31	4.9	0.54	401	10.15	0.12
DUP 014292	4.0	41	101.3	1.71	3.6	0.02	0.31	5.8	0.41	548	11.14	0.12
DUP 014316	4.3	54	407.8	1.77	4.0	0.01	0.27	6.1	0.41	403	14.52	0.10
DUP 014352	1.4	40	67.5	1.48	3.2	<0.01	0.18	6.2	0.21	301	6.65	0.11
STD BLANK	<0.1	<1	<0.2	<0.01	<0.1	<0.01	<0.01	<0.5	<0.01	<5	<0.05	<0.01
STD BLANK	<0.1	<1	<0.2	<0.01	<0.1	<0.01	<0.01	<0.5	<0.01	<5	<0.05	<0.01
STD BLANK	<0.1	<1	<0.2	<0.01	<0.1	<0.01	<0.01	<0.5	<0.01	<5	<0.05	<0.01
STD OREAS 25a	5.9	78	24.9	6.41	22.5	0.07	0.14	13.9	0.22	443	1.63	0.04
STD OREAS 600	6.9	25	495.3	2.24	3.9	0.27	0.22	19.0	0.35	693	2.00	0.06
STD OREAS 25a	5.7	79	24.9	6.21	20.1	0.06	0.14	13.9	0.20	427	1.61	0.04

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TEST REPORT: YVR1910426

Project Name: Spius_2019_Submission: #1
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	IMS-128 Ni	IMS-128 P	IMS-128 Pb	IMS-128 Re	IMS-128 S	IMS-128 Sb	IMS-128 Sc	IMS-128 Se	IMS-128 Sr	IMS-128 Te	IMS-128 Th	IMS-128 Ti
	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%
Sample ID	0.1	10	0.2	0.005	0.01	0.05	0.1	0.2	0.5	0.05	0.2	0.005
Granite Blank	2.5	392	1.0	<0.005	0.02	0.06	2.8	<0.2	26.0	<0.05	2.2	0.100
Granite Blank	2.5	400	0.9	<0.005	0.01	<0.05	2.9	<0.2	24.6	<0.05	2.2	0.104
014282	3.0	390	2.9	<0.005	0.16	8.30	2.8	<0.2	34.4	<0.05	1.9	0.041
014283	2.8	184	2.3	<0.005	0.16	0.61	2.2	<0.2	23.1	0.05	2.7	0.029
014284	2.7	66	4.1	0.013	0.08	2.57	0.6	<0.2	22.9	<0.05	0.4	<0.005
014285	2.6	57	8.3	0.026	0.17	8.43	1.9	<0.2	29.6	<0.05	0.8	<0.005
014286	2.6	444	2.1	<0.005	0.15	1.38	2.5	0.2	28.9	<0.05	1.9	0.070
014287	3.2	545	2.0	<0.005	0.13	0.63	3.5	<0.2	33.5	<0.05	1.4	0.085
014288	3.1	489	2.6	<0.005	0.20	0.77	2.6	<0.2	40.4	<0.05	1.3	0.074
014289	3.7	626	1.9	<0.005	0.32	0.08	4.5	0.3	68.2	<0.05	1.6	0.085
014290	2.9	559	1.9	0.008	0.23	0.06	3.1	0.2	51.6	0.06	1.5	0.060
014291	189.8	927	19.4	0.289	2.34	6.83	7.4	3.1	70.2	1.17	1.6	0.156
014292	2.7	455	2.6	0.018	0.12	0.20	3.3	<0.2	53.9	<0.05	1.3	0.061
014293	2.8	458	3.2	<0.005	0.30	0.31	3.0	0.2	88.4	<0.05	1.4	0.033
014294	4.7	728	4.4	0.009	0.68	0.50	7.2	0.8	122.1	0.07	1.8	0.055
014295	3.1	484	2.3	<0.005	0.41	0.07	3.2	0.6	50.5	<0.05	1.8	0.052
014296	4.3	1894	2.4	<0.005	0.40	0.09	6.9	0.9	119.2	<0.05	3.5	0.066
014297	3.5	873	1.6	<0.005	0.53	<0.05	4.5	0.8	61.9	<0.05	2.3	0.075
014298	3.4	569	2.7	0.006	0.45	0.12	3.5	0.6	50.2	<0.05	1.4	0.035
014299	2.5	314	3.4	0.013	0.45	0.12	1.5	0.7	26.4	<0.05	1.2	0.017
014300	2.1	42	4.2	0.007	0.13	0.11	0.4	0.2	20.9	<0.05	0.5	<0.005
014301	0.3	73	0.2	<0.005	<0.01	<0.05	0.1	<0.2	72.9	<0.05	<0.2	<0.005
014302	2.9	537	2.4	<0.005	0.48	0.08	2.2	0.7	29.7	0.05	1.5	0.042
014303	3.3	503	2.0	0.011	0.81	<0.05	2.1	1.1	25.3	<0.05	1.4	0.031
014304	3.5	463	2.7	<0.005	0.53	0.09	2.4	0.9	30.7	0.16	1.9	0.025

***Please refer to the cover page for comments regarding this test report. ***

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Unit 1, 20120 102nd Avenue
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Phone: +1-604-888-0875

To: **Pacific Ridge Exploration Ltd**
Suite 1100, 1111 Melville Steet
Vancouver, BC V6E 3V6
Canada

TEST REPORT: YVR1910426

Project Name: Spius_2019_Submission: #1
Job Received Date: 19-Jun-2019
Job Report Date: 30-Jun-2019
Report Version: Final

Sample ID	IMS-128 Ni ppm 0.1	IMS-128 P ppm 10	IMS-128 Pb ppm 0.2	IMS-128 Re ppm 0.005	IMS-128 S % 0.01	IMS-128 Sb ppm 0.05	IMS-128 Sc ppm 0.1	IMS-128 Se ppm 0.2	IMS-128 Sr ppm 0.5	IMS-128 Te ppm 0.05	IMS-128 Th ppm 0.2	IMS-128 Ti % 0.005
014305	2.5	203	4.5	0.029	0.24	0.12	1.0	0.4	24.5	<0.05	0.8	0.005
014306	2.2	193	4.7	<0.005	0.43	0.16	0.8	0.4	31.6	<0.05	1.6	<0.005
014307	3.6	620	2.3	0.021	0.39	0.06	3.1	0.4	44.2	<0.05	1.8	0.050
014308	2.8	510	3.3	<0.005	0.63	0.08	2.5	0.6	49.3	0.06	1.5	0.016
014309	2.6	412	3.8	0.006	0.76	0.09	2.2	0.6	52.1	0.10	1.6	0.013
014310	2.2	474	1.9	<0.005	1.06	0.07	2.0	0.5	29.7	0.07	2.3	0.008
014310PD	2.1	491	2.0	<0.005	1.10	0.08	1.9	0.5	27.9	0.12	2.3	0.008
014311	10.8	693	35.5	0.241	1.65	1.38	3.7	2.6	60.4	0.33	3.7	0.093
014312	2.5	381	5.5	0.016	0.76	0.10	1.4	0.7	41.1	0.09	1.6	<0.005
014313	2.3	519	3.1	0.005	0.45	0.08	1.5	0.4	36.1	<0.05	1.5	0.019
014314	2.7	429	2.6	0.016	0.62	0.07	1.6	0.8	32.5	0.07	1.4	0.029
014315	2.9	456	3.0	0.017	0.76	0.05	2.0	0.5	31.7	<0.05	1.7	0.035
014316	3.3	546	2.6	0.013	0.81	0.08	2.2	0.6	34.2	0.07	1.5	0.047
014317	2.5	184	6.2	<0.005	0.14	0.19	1.4	<0.2	86.9	<0.05	0.6	<0.005
014318	3.3	577	2.9	0.051	0.84	0.13	2.1	0.7	38.6	<0.05	1.5	0.028
014319	3.6	656	2.4	0.031	0.72	0.06	2.8	0.8	35.1	0.05	1.4	0.061
014320	7.2	1286	1.6	<0.005	0.63	<0.05	6.2	0.6	51.7	0.05	0.7	0.152
014321	1.2	83	0.4	<0.005	<0.01	<0.05	0.2	<0.2	77.5	<0.05	<0.2	<0.005
014322	3.1	444	2.1	<0.005	0.57	0.07	2.1	0.6	35.3	<0.05	1.4	0.035
014323	3.4	545	2.2	0.011	0.54	0.07	2.7	0.5	37.5	0.09	1.8	0.060
014324	3.8	517	2.5	0.016	0.67	<0.05	2.1	0.7	29.7	<0.05	1.4	0.051
014325	3.6	540	2.7	0.010	0.91	0.06	1.8	0.8	34.2	<0.05	1.3	0.027
014326	4.1	221	3.2	0.006	0.54	0.07	0.9	0.4	27.6	<0.05	0.9	0.005
014327	2.6	381	2.8	0.006	0.85	<0.05	1.2	0.6	26.6	0.09	0.8	0.010
014328	3.2	451	2.9	0.126	0.91	<0.05	1.7	0.7	29.2	0.06	1.1	0.025

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To: **Pacific Ridge Exploration Ltd**
Suite 1100, 1111 Melville Steet
Vancouver, BC V6E 3V6
Canada

TEST REPORT: YVR1910426

Project Name: Spius_2019_Submission: #1
Job Received Date: 19-Jun-2019
Job Report Date: 30-Jun-2019
Report Version: Final

Sample ID	IMS-128 Ni ppm 0.1	IMS-128 P ppm 10	IMS-128 Pb ppm 0.2	IMS-128 Re ppm 0.005	IMS-128 S % 0.01	IMS-128 Sb ppm 0.05	IMS-128 Sc ppm 0.1	IMS-128 Se ppm 0.2	IMS-128 Sr ppm 0.5	IMS-128 Te ppm 0.05	IMS-128 Th ppm 0.2	IMS-128 Ti % 0.005
014329	2.9	243	4.7	0.025	0.70	0.12	0.5	0.5	28.0	0.11	1.4	<0.005
014330	5.7	351	5.4	0.020	1.03	0.53	0.9	0.6	31.8	0.11	1.2	<0.005
014331	4.5	351	5.5	0.021	1.11	0.50	1.0	0.7	34.4	<0.05	1.2	<0.005
014332	3.9	174	5.1	0.027	0.76	0.29	0.5	0.6	26.7	0.07	1.5	<0.005
014333	4.6	349	2.6	0.007	0.49	0.09	1.2	0.3	41.5	<0.05	1.4	0.013
014334	2.9	504	4.1	<0.005	0.92	0.09	1.5	0.5	51.3	0.10	1.4	0.010
014335	3.3	526	3.3	0.013	0.70	0.07	2.0	0.5	65.4	<0.05	1.6	0.024
014336	212.6	999	21.0	0.316	2.46	6.77	7.1	3.1	75.9	1.19	1.6	0.161
014337	3.6	594	2.2	<0.005	0.50	<0.05	2.8	0.3	69.5	<0.05	1.4	0.062
014338	4.5	676	2.5	0.008	0.74	<0.05	3.0	0.4	39.9	<0.05	1.2	0.073
014339	1.8	375	3.1	0.027	0.48	<0.05	1.2	0.3	25.8	0.05	1.2	0.021
014340	2.0	365	3.6	0.006	0.45	<0.05	1.5	0.3	23.9	0.05	0.8	0.036
014341	2.1	359	3.5	0.011	0.56	<0.05	1.2	0.3	25.8	<0.05	1.2	0.018
014342	2.0	476	2.3	0.009	0.41	<0.05	1.6	<0.2	26.7	<0.05	0.7	0.044
014343	1.9	346	2.3	<0.005	0.43	<0.05	1.5	0.2	25.7	0.06	0.7	0.042
014344	1.9	321	2.9	0.043	0.56	<0.05	1.2	0.3	50.3	0.07	0.9	0.014
014345	2.1	141	5.6	0.039	0.43	0.45	0.6	0.3	69.0	<0.05	0.8	<0.005
014346	2.0	288	2.9	0.021	0.46	0.21	1.1	0.3	47.0	<0.05	1.0	0.012
014347	2.0	234	4.0	0.098	0.43	0.07	0.9	0.4	30.3	<0.05	0.8	0.013
014348	2.0	290	3.8	0.010	0.47	0.26	1.0	0.2	37.7	<0.05	0.8	0.018
014349	2.3	322	6.9	0.020	0.56	0.06	1.3	0.3	34.0	<0.05	3.0	0.023
014350	2.1	311	3.0	0.007	0.50	<0.05	1.2	0.3	30.6	<0.05	1.2	0.023
014351	0.7	77	0.4	<0.005	<0.01	<0.05	0.3	<0.2	74.1	<0.05	<0.2	<0.005
014352	1.6	319	3.1	0.009	0.65	<0.05	1.2	0.3	30.7	0.05	1.0	0.017
014353	3.4	296	3.8	0.010	0.69	0.05	0.9	0.4	47.1	0.05	1.3	0.005

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To: **Pacific Ridge Exploration Ltd**
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Vancouver, BC V6E 3V6
Canada

TEST REPORT: YVR1910426

Project Name: Spius_2019_Submission: #1
Job Received Date: 19-Jun-2019
Job Report Date: 30-Jun-2019
Report Version: Final

Sample ID	IMS-128 Ni ppm 0.1	IMS-128 P ppm 10	IMS-128 Pb ppm 0.2	IMS-128 Re ppm 0.005	IMS-128 S % 0.01	IMS-128 Sb ppm 0.05	IMS-128 Sc ppm 0.1	IMS-128 Se ppm 0.2	IMS-128 Sr ppm 0.5	IMS-128 Te ppm 0.05	IMS-128 Th ppm 0.2	IMS-128 Ti % 0.005
014354	3.2	250	3.0	0.057	0.47	0.06	1.2	0.4	43.7	<0.05	1.1	0.013
014355	3.2	273	2.7	<0.005	0.44	0.12	1.2	0.2	38.3	<0.05	1.5	0.007
014356	3.1	88	3.9	0.029	0.37	0.19	0.6	0.3	41.3	<0.05	0.8	<0.005
014357	3.5	243	4.2	0.123	0.84	0.07	0.9	0.9	57.6	<0.05	1.2	0.006
014358	3.1	241	3.7	0.038	0.69	<0.05	1.1	0.4	59.1	<0.05	1.0	0.009
014359	3.5	261	3.8	0.111	0.77	2.76	1.2	0.5	77.3	<0.05	0.9	<0.005
014360	3.2	288	3.5	0.006	0.47	0.50	1.5	0.3	55.7	<0.05	1.0	0.009
014361	3.1	469	3.6	0.026	0.82	1.35	1.6	0.5	53.4	<0.05	1.2	0.007
014362	3.3	403	3.4	0.015	0.57	0.11	1.7	0.3	48.6	0.11	1.6	0.013
014363	3.0	418	3.8	0.033	0.59	0.20	1.7	0.4	47.7	<0.05	1.6	0.015
014364	2.8	432	3.1	0.062	0.55	<0.05	1.8	0.3	44.9	<0.05	1.7	0.017
014364PD	2.9	431	3.1	0.068	0.53	<0.05	1.7	0.3	44.2	0.06	1.7	0.017
014365	12.6	681	35.1	0.233	1.74	1.23	4.0	2.7	59.7	0.36	3.7	0.094
014366	3.0	530	2.7	0.105	0.67	0.08	1.9	0.5	45.6	0.06	1.4	0.023
014367	2.9	375	4.7	0.028	0.73	0.20	1.5	0.5	55.0	<0.05	1.2	0.008
014368	3.2	399	3.5	0.034	0.70	0.30	1.8	0.5	58.0	<0.05	1.3	0.010
014369	3.0	412	3.5	0.079	0.69	0.08	1.9	0.3	51.7	<0.05	1.5	0.012
014370	3.6	443	2.7	0.013	0.93	<0.05	1.8	0.7	44.2	<0.05	1.3	0.016
014371	0.3	62	0.2	<0.005	<0.01	<0.05	0.2	<0.2	62.8	<0.05	<0.2	<0.005
014372	4.4	542	2.4	0.006	0.78	0.06	3.0	0.6	45.8	<0.05	1.4	0.103
014373	4.3	451	2.7	0.011	0.29	0.07	2.9	<0.2	50.0	<0.05	1.1	0.112
014374	3.9	459	2.6	0.008	0.61	0.06	2.6	0.3	44.4	<0.05	1.4	0.072
014375	4.1	528	1.9	<0.005	0.24	<0.05	3.5	<0.2	47.5	<0.05	1.0	0.149
014376	4.0	462	3.4	<0.005	0.28	<0.05	2.7	<0.2	48.9	<0.05	1.0	0.087
014377	4.3	420	3.0	0.011	0.32	<0.05	2.4	0.3	43.6	0.06	0.9	0.076

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TEST REPORT: YVR1910426

Project Name: Spius_2019_Submission: #1
Job Received Date: 19-Jun-2019
Job Report Date: 30-Jun-2019
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Sample ID	IMS-128 Ni ppm 0.1	IMS-128 P ppm 10	IMS-128 Pb ppm 0.2	IMS-128 Re ppm 0.005	IMS-128 S % 0.01	IMS-128 Sb ppm 0.05	IMS-128 Sc ppm 0.1	IMS-128 Se ppm 0.2	IMS-128 Sr ppm 0.5	IMS-128 Te ppm 0.05	IMS-128 Th ppm 0.2	IMS-128 Ti % 0.005
014378	3.4	226	12.0	0.013	1.09	1.37	1.1	0.8	107.3	0.08	1.2	0.006
014379	3.3	378	4.0	0.048	0.64	1.52	1.8	0.4	81.7	0.06	1.7	0.014
014380	4.3	467	3.0	0.007	0.57	0.08	2.7	0.3	61.7	<0.05	1.7	0.040
014381	196.4	923	20.9	0.284	2.50	6.78	7.6	3.3	73.2	1.20	1.7	0.162
014382	4.2	567	2.4	0.046	0.80	<0.05	2.3	0.4	55.4	<0.05	1.2	0.046
014383	4.4	517	2.5	0.039	0.74	0.09	2.5	0.6	50.5	0.08	1.8	0.032
014384	4.4	519	2.3	0.006	0.76	0.07	2.6	0.5	61.7	0.07	1.2	0.034
014385	4.0	508	2.5	0.008	0.91	0.05	2.0	0.5	52.7	0.06	1.7	0.021
014386	3.4	511	1.5	0.033	0.50	0.06	2.1	0.3	38.5	<0.05	0.7	0.071
014387	4.4	549	3.0	0.006	0.70	0.07	2.6	0.4	63.1	<0.05	1.4	0.040
014388	3.6	446	1.7	0.013	0.39	0.08	2.1	0.3	57.6	<0.05	1.2	0.047
014389	4.7	479	2.3	0.053	0.58	0.07	2.5	0.4	95.8	<0.05	1.3	0.038
014390	4.1	572	4.4	0.069	0.97	0.63	2.2	0.6	275.5	0.06	1.3	0.021
014391	0.4	50	<0.2	<0.005	<0.01	<0.05	0.1	<0.2	40.3	<0.05	<0.2	<0.005
014392	3.6	485	2.9	0.013	0.85	1.35	1.7	0.5	209.2	0.08	1.8	0.010
014393	4.1	680	1.7	0.016	0.79	0.15	2.1	0.5	106.4	<0.05	1.3	0.042
014394	4.3	524	2.5	0.029	0.83	0.10	1.9	0.4	186.8	0.10	1.4	0.027
014395	4.5	637	2.0	0.024	0.44	0.07	3.2	0.3	158.6	<0.05	1.5	0.067
014396	4.3	668	2.3	<0.005	0.62	0.12	3.0	0.5	284.9	<0.05	1.4	0.037
014397	6.0	647	6.7	0.014	0.92	0.22	5.7	0.7	139.9	<0.05	1.8	0.045
014398	3.5	588	3.2	0.012	1.10	0.16	2.7	0.5	144.2	<0.05	1.6	0.014
014399	4.0	601	3.8	0.034	1.78	0.45	1.3	1.0	339.7	0.07	1.4	<0.005
014400	3.8	597	2.7	0.041	1.60	0.09	1.3	0.7	266.7	<0.05	1.2	0.007
014400PD	3.9	597	2.9	0.044	1.65	0.10	1.3	0.8	293.4	<0.05	1.4	0.008
014401	12.2	729	35.7	0.227	1.73	1.26	3.9	2.7	60.7	0.35	3.7	0.092

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Project Name: Spius_2019_Submission: #1
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014402	3.3	435	3.6	0.015	0.88	0.13	1.6	0.6	250.2	<0.05	1.5	0.018
014403	3.9	517	3.4	0.005	1.33	0.09	1.6	0.7	115.2	<0.05	1.4	0.015
014404	4.0	562	2.4	0.008	1.02	<0.05	2.0	0.5	91.1	<0.05	1.1	0.052
DUP 014292	2.8	437	2.6	0.017	0.12	0.19	3.3	<0.2	55.1	<0.05	1.4	0.059
DUP 014316	3.4	544	2.7	0.014	0.81	0.09	2.1	0.6	35.0	<0.05	1.5	0.047
DUP 014352	1.7	315	3.0	0.008	0.67	<0.05	1.2	0.3	30.5	<0.05	0.9	0.017
STD BLANK	<0.1	<10	<0.2	<0.005	<0.01	<0.05	<0.1	<0.2	<0.5	<0.05	<0.2	<0.005
STD BLANK	<0.1	<10	<0.2	<0.005	<0.01	<0.05	<0.1	<0.2	<0.5	<0.05	<0.2	<0.005
STD BLANK	<0.1	<10	<0.2	<0.005	<0.01	<0.05	<0.1	<0.2	<0.5	<0.05	<0.2	<0.005
STD OREAS 25a	28.8	396	20.2	<0.005	0.05	0.27	9.5	0.9	18.1	<0.05	10.5	0.086
STD OREAS 600	15.4	522	154.1	<0.005	1.74	10.87	2.0	7.0	38.9	6.92	5.3	<0.005
STD OREAS 25a	28.5	375	21.1	<0.005	0.05	0.25	9.3	0.5	16.7	<0.05	10.9	0.052

***Please refer to the cover page for comments regarding this test report. ***

MSALABS
Unit 1, 20120 102nd Avenue
Langley, BC V1M 4B4
Phone: +1-604-888-0875

To: **Pacific Ridge Exploration Ltd**
Suite 1100, 1111 Melville Steet
Vancouver, BC V6E 3V6
Canada

TEST REPORT: YVR1910426

Project Name: Spius_2019_Submission: #1
Job Received Date: 19-Jun-2019
Job Report Date: 30-Jun-2019
Report Version: Final

Sample ID	IMS-128 Tl ppm 0.05	IMS-128 U ppm 0.05	IMS-128 V ppm 1	IMS-128 W ppm 0.05	IMS-128 Y ppm 0.5	IMS-128 Zn ppm 2
Granite Blank	<0.05	0.47	25	0.51	9.0	27
Granite Blank	<0.05	0.50	26	0.56	8.9	28
014282	0.10	1.08	19	0.63	6.5	50
014283	0.07	1.03	12	0.67	5.6	36
014284	<0.05	6.14	3	0.89	2.5	8
014285	<0.05	7.69	4	0.83	12.2	26
014286	0.09	1.01	25	0.58	5.7	47
014287	0.12	1.82	26	0.59	6.8	52
014288	0.10	0.73	26	0.57	4.8	47
014289	0.12	0.98	37	0.48	7.3	61
014290	0.10	0.81	28	0.47	5.6	54
014291	0.72	0.48	80	5.44	7.1	164
014292	0.09	1.30	29	0.45	6.5	52
014293	0.08	1.06	27	0.35	5.9	55
014294	0.14	1.00	46	0.44	8.7	104
014295	0.09	0.66	27	0.47	5.0	55
014296	0.11	1.37	73	0.36	14.9	83
014297	0.10	0.82	44	0.36	11.0	63
014298	0.08	1.09	24	0.57	7.4	52
014299	0.06	3.27	11	0.56	5.4	33
014300	<0.05	1.80	3	0.68	2.7	9
014301	<0.05	0.12	1	<0.05	2.6	<2
014302	0.08	1.25	22	0.50	5.8	48
014303	0.08	1.00	20	0.50	5.2	47
014304	0.08	1.08	20	0.50	5.6	46

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Job Received Date: 19-Jun-2019
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Sample ID	IMS-128 Tl ppm 0.05	IMS-128 U ppm 0.05	IMS-128 V ppm 1	IMS-128 W ppm 0.05	IMS-128 Y ppm 0.5	IMS-128 Zn ppm 2
014305	<0.05	3.27	7	0.65	3.8	21
014306	<0.05	2.87	5	0.52	4.8	91
014307	0.10	1.26	28	0.48	6.5	55
014308	0.06	1.19	21	0.44	6.8	54
014309	0.07	2.15	17	0.54	6.4	50
014310	0.06	1.14	15	0.50	4.2	45
014310PD	0.06	1.13	15	0.52	4.1	46
014311	0.22	0.71	51	2.91	5.9	234
014312	<0.05	1.96	11	0.56	5.9	48
014313	0.06	1.35	14	0.52	6.5	43
014314	0.06	0.80	16	0.54	4.6	37
014315	0.07	1.54	17	0.53	5.8	38
014316	0.08	1.51	21	0.56	5.3	44
014317	<0.05	0.81	10	1.03	7.6	32
014318	0.08	0.95	20	0.56	5.0	44
014319	0.11	1.13	29	0.54	5.5	57
014320	0.18	1.00	63	0.33	8.8	149
014321	<0.05	0.12	2	0.25	2.8	<2
014322	0.07	1.29	18	0.40	5.6	38
014323	0.12	1.67	24	0.55	5.7	53
014324	0.10	1.24	23	0.62	5.6	48
014325	0.07	1.20	19	0.60	6.3	46
014326	<0.05	0.52	7	1.13	3.6	21
014327	<0.05	0.48	9	0.64	4.4	33
014328	0.08	1.16	14	0.69	5.5	38

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Sample ID	IMS-128 Tl ppm 0.05	IMS-128 U ppm 0.05	IMS-128 V ppm 1	IMS-128 W ppm 0.05	IMS-128 Y ppm 0.5	IMS-128 Zn ppm 2
014329	<0.05	4.11	3	0.74	4.2	27
014330	<0.05	1.25	6	1.35	4.0	34
014331	<0.05	1.17	7	1.05	4.2	36
014332	<0.05	1.92	4	1.13	3.0	31
014333	0.06	1.30	11	1.14	4.0	25
014334	0.07	1.47	12	0.50	6.1	30
014335	0.08	2.11	17	0.60	5.8	42
014336	0.77	0.52	80	5.70	7.2	156
014337	0.12	0.97	27	0.63	6.5	61
014338	0.13	0.99	33	0.43	6.1	91
014339	<0.05	0.91	7	0.49	4.8	51
014340	<0.05	0.66	9	0.52	4.4	49
014341	0.06	1.14	7	0.56	4.7	42
014342	<0.05	0.28	9	0.54	5.1	54
014343	<0.05	0.30	6	0.54	3.9	50
014344	<0.05	0.29	5	0.53	4.3	48
014345	<0.05	2.49	2	0.64	2.9	29
014346	0.06	0.90	4	0.54	4.6	45
014347	<0.05	2.06	4	0.60	3.5	41
014348	<0.05	0.76	5	0.57	4.2	45
014349	0.06	0.54	6	0.62	4.7	68
014350	<0.05	0.89	5	0.60	4.6	51
014351	<0.05	0.13	1	0.22	2.7	<2
014352	<0.05	0.58	5	0.45	4.7	94
014353	0.05	1.41	5	0.91	4.8	56

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Report Version: Final

Sample ID	IMS-128 Tl ppm 0.05	IMS-128 U ppm 0.05	IMS-128 V ppm 1	IMS-128 W ppm 0.05	IMS-128 Y ppm 0.5	IMS-128 Zn ppm 2
014354	0.05	0.71	5	0.85	4.3	54
014355	0.05	1.74	5	0.89	4.7	50
014356	<0.05	2.49	3	0.92	2.9	29
014357	<0.05	1.74	4	0.97	4.5	50
014358	<0.05	0.61	5	0.89	4.1	38
014359	0.06	0.85	4	0.12	4.6	55
014360	0.06	0.73	6	0.08	5.2	50
014361	0.07	3.73	7	0.09	7.1	68
014362	0.08	1.48	9	0.09	6.4	50
014363	0.08	1.73	8	0.09	6.3	51
014364	0.07	1.92	9	0.06	7.5	57
014364PD	0.07	1.91	9	0.06	7.2	59
014365	0.23	0.75	51	2.93	6.6	236
014366	0.08	0.68	11	0.11	7.7	69
014367	0.06	0.95	7	0.11	6.0	64
014368	0.07	0.65	8	0.11	6.3	64
014369	0.06	1.02	9	0.14	7.4	96
014370	0.08	0.94	13	0.16	6.2	57
014371	<0.05	0.09	1	<0.05	2.3	<2
014372	0.11	1.32	32	0.20	5.8	88
014373	0.08	1.83	29	0.13	6.5	54
014374	0.10	1.74	23	0.14	4.9	62
014375	0.16	1.32	37	0.12	5.5	71
014376	0.13	1.85	28	0.11	6.6	52
014377	0.11	1.60	26	0.07	5.5	58

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Report Version: Final

Sample ID	IMS-128 Tl ppm 0.05	IMS-128 U ppm 0.05	IMS-128 V ppm 1	IMS-128 W ppm 0.05	IMS-128 Y ppm 0.5	IMS-128 Zn ppm 2
014378	0.06	3.03	5	0.13	5.2	48
014379	0.08	2.78	13	0.11	5.6	55
014380	0.12	1.62	23	0.07	5.7	49
014381	0.78	0.50	82	6.05	8.2	165
014382	0.12	1.19	24	0.11	5.1	52
014383	0.10	1.07	23	0.10	5.5	50
014384	0.10	0.96	25	0.10	4.7	61
014385	0.08	2.21	18	0.09	4.9	56
014386	0.09	0.44	26	0.08	3.5	46
014387	0.10	1.44	23	0.08	5.9	56
014388	0.09	0.83	23	0.06	4.5	49
014389	0.10	0.79	24	0.08	5.2	50
014390	0.08	0.66	19	0.09	5.1	51
014391	<0.05	0.07	<1	0.10	1.6	<2
014392	0.07	1.58	12	0.76	4.7	43
014393	0.11	1.28	25	0.59	5.3	76
014394	0.09	1.21	19	0.74	4.5	76
014395	0.12	0.87	31	0.66	5.1	68
014396	0.08	0.71	28	0.58	5.1	61
014397	0.15	1.10	40	0.64	7.5	84
014398	0.08	0.70	21	0.44	5.0	51
014399	0.06	1.20	9	0.61	5.6	68
014400	0.07	0.79	12	0.56	4.7	44
014400PD	0.07	1.16	13	0.57	4.8	46
014401	0.23	0.76	49	2.78	6.8	223

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TEST REPORT: YVR1910426

Project Name: Spius_2019_Submission: #1
Job Received Date: 19-Jun-2019
Job Report Date: 30-Jun-2019
Report Version: Final

Sample ID	IMS-128 Tl ppm 0.05	IMS-128 U ppm 0.05	IMS-128 V ppm 1	IMS-128 W ppm 0.05	IMS-128 Y ppm 0.5	IMS-128 Zn ppm 2
014402	0.08	1.73	14	0.60	4.8	86
014403	0.06	1.43	14	0.62	5.7	80
014404	0.09	1.41	22	0.69	4.8	55
DUP 014292	0.09	1.26	28	0.44	6.5	50
DUP 014316	0.08	1.52	21	0.61	5.4	44
DUP 014352	<0.05	0.56	5	0.46	4.6	93
STD BLANK	<0.05	<0.05	<1	<0.05	<0.5	<2
STD BLANK	<0.05	<0.05	<1	<0.05	<0.5	<2
STD BLANK	<0.05	<0.05	<1	<0.05	<0.5	<2
STD OREAS 25a	0.21	1.47	125	<0.05	4.3	32
STD OREAS 600	0.59	1.08	13	0.60	6.2	606
STD OREAS 25a	0.20	1.61	124	0.06	4.8	30

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To: **Pacific Ridge Exploration Ltd**
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Canada

TEST REPORT:	**YVR1910440**

Project Name:	Spius_2019_Submission: #2
Job Received Date:	25-Jun-2019
Job Report Date:	03-Jul-2019
Number of Samples:	71
Report Version:	Final

COMMENTS:

Test results reported relate to the tested samples only on an “as received” basis. Unless otherwise stated above, sufficient sample was received for the methods requested and all samples were received in acceptable condition. Analytical results in unsigned reports marked "provisional" are subject to change, pending final QC review and approval. The customer has not provided any information than can affect the validity of the test results. Please refer to MSALABS' Schedule of Services and Fees for our complete Terms and Conditions. Preliminary results are applicable when a portion of samples in a job is 100% completed and reported or 1 of a number of methods on the same job have been completed 100%. Results cannot change, but additional results or results for additional methods can be added.

SAMPLE PREPARATION	
METHOD CODE	DESCRIPTION
PRP-910	Dry, Crush to 70% passing 2mm, Split 250g, Pulverize to 85% passing 75µm

ANALYTICAL METHODS	
METHOD CODE	DESCRIPTION
IMS-128	Multi-Element (39 elements), 20g, 3:1 Aqua Regia, ICP-AES/MS, Ultra Trace Level

Signature:

Yvette Hsi, BSc.
Laboratory Manager
MSALABS

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To: **Pacific Ridge Exploration Ltd**
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Canada

TEST REPORT: YVR1910440

Project Name: Spius_2019_Submission: #2
Job Received Date: 25-Jun-2019
Job Report Date: 03-Jul-2019
Report Version: Final

Sample ID	Sample Type	PWE-100 Rec. Wt. kg 0.01	Method Analyte Units LOR	IMS-128 Ag ppm 0.05	IMS-128 Al % 0.01	IMS-128 As ppm 0.2	IMS-128 Au ppm 0.001	IMS-128 B ppm 10	IMS-128 Ba ppm 10	IMS-128 Bi ppm 0.05	IMS-128 Ca % 0.01	IMS-128 Cd ppm 0.05	IMS-128 Co ppm 0.1	IMS-128 Cr ppm 1
Granite Blank	QC-P-BK	--		<0.05	0.98	1.0	<0.001	16	67	<0.05	0.66	<0.05	4.2	44
Granite Blank	QC-P-BK	--		<0.05	1.00	0.9	<0.001	16	69	<0.05	0.68	<0.05	4.4	45
014405	Core	5.34		0.07	0.69	1.0	<0.001	13	122	0.29	0.92	0.20	4.0	62
014406	Core	5.17		0.16	0.89	2.3	0.002	15	103	0.40	1.02	0.33	4.3	60
014407	Core	5.41		0.11	1.12	1.3	<0.001	16	154	0.15	1.13	0.38	5.5	54
014408	Core	5.14		0.07	1.21	1.9	<0.001	14	170	0.20	1.03	<0.05	5.5	56
014409	Core	4.66		0.13	0.63	1.1	0.002	10	73	0.34	1.74	0.73	5.1	58
014410	Core	5.17		0.07	1.17	1.6	<0.001	10	192	0.19	1.32	0.10	5.9	60
014411	Core	1.54		<0.05	0.02	0.4	<0.001	<10	10	<0.05	>25	<0.05	0.3	15
014412	Core	4.05		0.10	0.97	2.1	<0.001	<10	262	0.12	1.40	0.06	5.2	44
014413	Core	5.56		0.14	1.10	1.4	<0.001	11	238	0.19	0.95	0.09	5.5	59
014414	Core	5.37		0.12	0.87	1.0	0.001	<10	157	0.26	0.98	0.06	5.2	59
014415	Core	4.95		0.15	0.75	1.4	0.002	<10	114	0.25	1.03	1.66	4.3	68
014416	Core	5.20		0.19	0.81	1.3	0.002	<10	113	0.25	1.07	0.11	5.1	73
014417	Core	4.99		0.19	0.92	1.4	0.002	<10	181	0.30	1.33	0.10	5.3	67
014418	Core	5.21		0.53	0.94	0.9	0.004	<10	157	0.26	0.99	0.23	6.6	70
014419	Core	5.14		0.29	0.84	1.3	0.002	10	164	0.27	1.25	0.21	4.9	68
014420	Core	4.86		0.20	0.76	1.5	0.002	<10	141	0.30	1.05	0.14	4.8	64
014420PD	QC-PD	--		0.19	0.74	1.3	0.002	<10	145	0.31	1.06	0.10	4.7	58
014421	Pulp	0.12		2.37	2.11	26.4	0.022	<10	111	1.98	1.09	1.03	35.3	191
014422	Core	5.06		0.17	1.06	0.8	0.001	<10	200	0.18	0.77	0.15	6.2	66
014423	Core	5.33		0.24	1.35	1.2	0.001	<10	258	0.21	0.92	0.26	7.6	68
014424	Core	5.26		0.11	0.90	4.6	0.001	<10	236	0.15	0.71	0.10	4.7	67
014425	Core	5.26		0.17	1.01	2.4	0.002	<10	238	0.15	0.70	0.22	5.5	60
014426	Core	5.76		0.19	1.07	0.9	0.002	<10	265	0.17	0.75	0.10	6.1	65

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TEST REPORT: YVR1910440

Project Name: Spius_2019_Submission: #2
Job Received Date: 25-Jun-2019
Job Report Date: 03-Jul-2019
Report Version: Final

Sample ID	Sample Type	PWE-100 Rec. Wt. kg 0.01	Method Analyte Units LOR	IMS-128 Ag ppm 0.05	IMS-128 Al % 0.01	IMS-128 As ppm 0.2	IMS-128 Au ppm 0.001	IMS-128 B ppm 10	IMS-128 Ba ppm 10	IMS-128 Bi ppm 0.05	IMS-128 Ca % 0.01	IMS-128 Cd ppm 0.05	IMS-128 Co ppm 0.1	IMS-128 Cr ppm 1
014427	Core	4.09		0.23	0.81	7.8	0.002	<10	217	0.17	1.01	0.09	4.1	63
014428	Core	6.74		0.60	1.05	61.7	0.004	<10	82	0.64	1.74	0.36	7.1	53
014429	Core	4.90		0.24	1.05	3.9	0.002	<10	269	0.26	0.83	0.21	6.1	55
014430	Core	5.32		0.20	1.17	1.5	0.003	<10	278	0.19	0.74	0.23	6.5	62
014431	Rock	1.11		<0.05	0.01	0.5	<0.001	<10	<10	<0.05	>25	<0.05	0.2	8
014432	Core	4.87		0.21	1.03	1.0	0.002	<10	231	0.22	1.03	0.62	6.3	49
014433	Core	2.75		0.21	0.88	4.2	0.002	<10	235	0.18	0.89	0.14	4.4	56
014434	Core	4.27		0.24	0.74	25.2	0.001	<10	361	0.18	1.14	0.16	2.2	51
014435	Core	5.17		0.19	1.38	6.5	0.002	<10	403	0.19	2.03	0.18	5.6	58
014436	Core	4.41		0.22	0.88	1.8	0.003	<10	194	0.25	1.00	0.36	5.0	56
014437	Core	5.26		0.23	1.02	1.6	0.004	<10	256	0.08	0.68	0.15	5.2	77
014488	Core	4.86		0.90	1.20	1.8	0.002	<10	251	0.13	0.42	0.10	6.7	47
014489	Core	5.01		0.30	1.03	1.7	0.002	<10	313	0.10	0.32	0.08	5.2	59
014490	Core	5.13		0.81	1.08	2.5	0.002	<10	622	0.32	0.51	0.10	5.6	57
014491	Core	5.90		0.32	0.86	2.8	0.002	<10	419	0.15	0.58	0.09	4.8	49
014492	Core	5.95		0.21	1.18	1.7	0.002	<10	348	0.14	0.32	0.08	5.5	110
014493	Core	7.03		0.76	1.27	2.9	0.004	<10	260	0.20	0.47	0.16	5.8	137
014494	Core	6.72		0.52	1.17	2.1	0.003	<10	331	0.24	0.34	0.12	5.3	147
014495	Rock	1.45		<0.05	0.02	0.3	<0.001	<10	<10	<0.05	>25	<0.05	0.2	7
014496	Core	7.24		0.19	1.34	1.4	0.001	<10	312	0.08	0.55	0.07	5.6	123
014497	Core	8.63		0.21	1.28	4.9	<0.001	<10	318	0.09	0.88	0.08	5.1	113
014498	Core	5.67		0.18	1.39	2.0	0.001	<10	326	0.06	0.55	0.08	5.8	132
014499	Core	6.84		0.50	1.44	5.6	0.003	<10	321	0.14	0.54	0.14	5.7	123
014500	Core	6.27		0.24	1.43	4.0	0.002	<10	416	0.15	0.50	0.06	5.7	133
014501	Core	7.44		0.15	1.78	23.5	0.001	11	593	0.09	1.31	0.05	5.2	116

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To: **Pacific Ridge Exploration Ltd**
Suite 1100, 1111 Melville Steet
Vancouver, BC V6E 3V6
Canada

TEST REPORT: YVR1910440

Project Name: Spius_2019_Submission: #2
Job Received Date: 25-Jun-2019
Job Report Date: 03-Jul-2019
Report Version: Final

Sample ID	Sample Type	PWE-100 Rec. Wt. kg 0.01	Method Analyte Units LOR	IMS-128 Ag ppm 0.05	IMS-128 Al % 0.01	IMS-128 As ppm 0.2	IMS-128 Au ppm 0.001	IMS-128 B ppm 10	IMS-128 Ba ppm 10	IMS-128 Bi ppm 0.05	IMS-128 Ca % 0.01	IMS-128 Cd ppm 0.05	IMS-128 Co ppm 0.1	IMS-128 Cr ppm 1
014502	Core	7.45		0.16	1.79	15.1	0.001	<10	458	<0.05	2.16	<0.05	8.1	84
014503	Core	7.02		0.24	1.75	3.8	0.002	<10	307	<0.05	1.03	0.06	8.7	101
014504	Core	7.56		0.17	1.58	12.1	0.002	<10	268	<0.05	1.04	<0.05	7.9	90
014505	Core	3.67		0.23	1.52	21.9	0.002	<10	345	0.08	1.75	0.11	8.5	115
014506	Core	4.65		0.18	1.51	39.9	0.001	<10	398	0.08	1.83	0.07	6.6	98
014507	Core	7.02		0.38	1.96	1.8	0.002	<10	476	0.07	0.98	0.10	9.7	156
014508	Core	7.82		0.23	1.21	4.1	0.002	<10	334	0.12	0.60	0.08	5.9	117
014509	Core	2.36		0.25	1.67	3.4	0.002	<10	365	0.18	0.81	0.10	7.7	158
014509PD	QC-PD	--		0.25	1.64	3.5	0.002	<10	356	0.19	0.86	0.11	7.7	139
014510	Pulp	0.13		2.37	2.22	27.0	0.024	<10	101	1.96	1.15	0.98	35.1	198
014511	Core	2.45		0.10	2.01	3.2	<0.001	<10	378	0.06	0.70	0.06	10.0	130
014512	Core	2.16		0.39	1.47	5.2	0.003	<10	319	0.18	0.45	0.12	5.0	142
014513	Core	8.64		0.37	1.31	9.4	0.002	<10	343	0.14	0.50	0.12	4.7	121
014514	Core	2.66		0.24	0.49	4.4	0.001	<10	389	0.07	0.60	0.09	1.1	62
014515	Core	4.98		0.20	1.18	1.8	0.001	<10	376	0.11	0.67	0.09	6.3	52
014516	Core	6.30		0.31	1.38	2.3	0.002	<10	397	0.16	0.41	0.15	8.0	53
014517	Core	7.17		0.53	1.24	3.5	0.004	<10	411	0.40	0.41	0.13	6.7	50
014518	Core	7.78		0.23	1.14	3.0	0.002	<10	435	0.11	0.53	0.13	7.1	48
014519	Core	7.04		0.21	1.06	2.2	0.002	<10	427	0.13	0.30	0.10	6.2	47
014520	Core	7.07		0.33	1.01	1.3	0.002	<10	270	0.09	0.35	0.09	5.7	49
014521	Core	2.13		0.14	0.94	1.1	<0.001	<10	198	0.10	0.38	<0.05	4.5	52
014522	Core	5.11		0.17	0.79	2.3	0.001	<10	380	0.06	0.57	0.07	3.2	64
014523	Core	7.30		0.30	0.91	1.0	0.002	<10	248	0.56	0.34	0.09	6.1	50
014524	Core	7.48		0.39	1.14	1.2	0.003	<10	285	0.10	0.43	0.10	5.9	51
014525	Rock	1.33		<0.05	0.01	0.6	<0.001	<10	<10	<0.05	>25	<0.05	0.2	4

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To: **Pacific Ridge Exploration Ltd**
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Vancouver, BC V6E 3V6
Canada

TEST REPORT: YVR1910440

Project Name: Spius_2019_Submission: #2
Job Received Date: 25-Jun-2019
Job Report Date: 03-Jul-2019
Report Version: Final

Sample ID	Sample Type	PWE-100 Rec. Wt. kg 0.01	Method Analyte Units LOR	IMS-128 Ag ppm 0.05	IMS-128 Al % 0.01	IMS-128 As ppm 0.2	IMS-128 Au ppm 0.001	IMS-128 B ppm 10	IMS-128 Ba ppm 10	IMS-128 Bi ppm 0.05	IMS-128 Ca % 0.01	IMS-128 Cd ppm 0.05	IMS-128 Co ppm 0.1	IMS-128 Cr ppm 1
DUP 014429				0.24	1.04	3.8	0.002	<10	264	0.26	0.82	0.21	5.9	55
DUP 014516				0.31	1.42	2.3	0.002	<10	401	0.15	0.42	0.14	8.2	57
STD BLANK				<0.05	<0.01	<0.2	<0.001	<10	<10	<0.05	<0.01	<0.05	<0.1	<1
STD BLANK				<0.05	<0.01	<0.2	<0.001	<10	<10	<0.05	<0.01	<0.05	<0.1	<1
STD OREAS 25a				<0.05	5.73	3.1	<0.001	20	58	0.29	0.16	<0.05	5.8	76
STD OREAS 600				24.78	0.95	87.1	0.204	<10	70	7.18	1.76	3.56	7.1	24

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TEST REPORT: YVR1910440

Project Name: Spius_2019_Submission: #2
Job Received Date: 25-Jun-2019
Job Report Date: 03-Jul-2019
Report Version: Final

Sample ID	IMS-128 Cu ppm 0.2	IMS-128 Fe % 0.01	IMS-128 Ga ppm 0.1	IMS-128 Hg ppm 0.01	IMS-128 K % 0.01	IMS-128 La ppm 0.5	IMS-128 Mg % 0.01	IMS-128 Mn ppm 5	IMS-128 Mo ppm 0.05	IMS-128 Na % 0.01	IMS-128 Ni ppm 0.1	IMS-128 P ppm 10	IMS-128 Pb ppm 0.2	IMS-128 Re ppm 0.005
Granite Blank	4.8	1.79	4.6	<0.01	0.11	5.9	0.53	527	2.61	0.12	3.0	430	1.3	<0.005
Granite Blank	5.8	1.78	4.7	<0.01	0.11	6.0	0.56	536	2.42	0.12	2.9	421	1.1	<0.005
014405	151.1	1.65	3.2	<0.01	0.27	6.8	0.29	361	10.68	0.09	4.1	453	3.4	0.022
014406	191.8	1.79	4.0	<0.01	0.28	3.8	0.47	485	21.33	0.10	3.0	471	2.4	0.027
014407	207.6	2.08	4.8	<0.01	0.23	3.2	0.59	496	29.03	0.13	3.1	545	1.8	0.061
014408	104.2	2.14	5.1	<0.01	0.31	3.6	0.63	521	16.49	0.15	3.3	574	2.0	0.016
014409	345.4	1.75	2.6	<0.01	0.24	4.3	0.34	276	17.48	0.06	3.7	538	3.0	0.090
014410	107.4	2.19	5.0	0.02	0.37	4.6	0.60	455	3.50	0.14	4.0	609	4.4	<0.005
014411	1.4	0.10	0.2	0.02	<0.01	1.5	1.05	125	0.59	<0.01	0.9	79	1.5	<0.005
014412	198.8	1.87	4.7	0.01	0.35	5.2	0.50	447	4.13	0.14	3.8	576	3.3	<0.005
014413	274.0	1.99	5.0	0.01	0.40	4.2	0.57	391	30.27	0.16	4.2	602	2.3	0.045
014414	234.6	1.85	4.6	<0.01	0.28	4.0	0.52	407	46.63	0.12	4.6	581	2.5	0.088
014415	346.7	1.75	4.5	0.01	0.23	5.4	0.43	334	7.44	0.10	4.4	507	2.7	0.059
014416	440.1	1.77	4.7	0.01	0.29	4.9	0.48	336	15.66	0.10	4.9	604	2.6	0.062
014417	344.8	1.88	5.0	<0.01	0.33	5.9	0.44	401	20.14	0.12	4.7	605	2.4	0.026
014418	1094.5	2.08	4.8	<0.01	0.35	4.3	0.52	355	79.35	0.13	5.0	578	1.7	0.101
014419	612.2	1.65	4.2	<0.01	0.31	4.7	0.42	363	17.76	0.12	4.8	535	2.2	0.021
014420	399.6	1.68	4.2	<0.01	0.29	5.2	0.40	322	2.95	0.12	4.5	499	2.3	<0.005
014420PD	397.8	1.70	3.9	<0.01	0.29	4.8	0.41	333	2.83	0.11	4.1	525	2.3	<0.005
014421	3502.1	3.70	6.8	0.05	1.25	7.8	2.47	278	255.07	0.10	211.2	955	21.0	0.297
014422	362.2	2.06	5.3	<0.01	0.45	3.4	0.62	398	5.05	0.15	5.2	630	1.3	0.006
014423	463.2	2.36	6.4	<0.01	0.56	3.3	0.81	570	31.05	0.18	6.3	784	1.5	0.052
014424	183.8	1.64	4.8	<0.01	0.37	4.3	0.44	426	2.59	0.16	4.7	508	2.1	<0.005
014425	402.1	1.97	5.0	<0.01	0.46	3.2	0.57	408	13.83	0.15	4.6	591	1.6	0.023
014426	429.9	2.03	5.6	<0.01	0.44	4.0	0.62	416	4.31	0.16	5.2	607	1.7	<0.005

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Vancouver, BC V6E 3V6
Canada

TEST REPORT: YVR1910440

Project Name: Spius_2019_Submission: #2
Job Received Date: 25-Jun-2019
Job Report Date: 03-Jul-2019
Report Version: Final

Sample ID	IMS-128 Cu ppm 0.2	IMS-128 Fe % 0.01	IMS-128 Ga ppm 0.1	IMS-128 Hg ppm 0.01	IMS-128 K % 0.01	IMS-128 La ppm 0.5	IMS-128 Mg % 0.01	IMS-128 Mn ppm 5	IMS-128 Mo ppm 0.05	IMS-128 Na % 0.01	IMS-128 Ni ppm 0.1	IMS-128 P ppm 10	IMS-128 Pb ppm 0.2	IMS-128 Re ppm 0.005
014427	446.6	1.29	3.7	<0.01	0.33	3.7	0.39	346	4.39	0.11	5.4	416	3.6	<0.005
014428	1177.0	2.72	5.4	0.02	0.32	6.0	0.48	541	21.36	0.10	4.7	990	3.8	0.027
014429	434.0	2.06	5.6	<0.01	0.41	4.3	0.60	422	3.69	0.15	4.7	613	2.2	<0.005
014430	489.6	2.23	5.7	<0.01	0.47	3.1	0.69	457	2.59	0.18	5.2	672	1.6	<0.005
014431	0.9	0.08	0.1	<0.01	<0.01	1.5	1.30	127	0.08	<0.01	0.4	73	0.7	<0.005
014432	513.9	2.13	5.1	<0.01	0.44	4.4	0.62	434	5.78	0.13	4.6	680	1.3	0.007
014433	416.3	1.67	5.0	<0.01	0.37	6.0	0.45	492	2.23	0.14	4.1	488	2.2	<0.005
014434	394.6	0.97	3.3	0.01	0.20	3.9	0.20	380	12.42	0.10	2.9	280	5.1	0.006
014435	466.3	2.11	6.4	<0.01	0.44	7.9	0.58	623	3.63	0.13	4.4	678	3.0	<0.005
014436	569.0	1.71	4.5	<0.01	0.35	4.3	0.50	406	2.95	0.12	4.3	545	2.6	<0.005
014437	598.0	1.94	4.2	<0.01	0.41	3.7	0.58	420	2.54	0.18	5.1	577	1.8	<0.005
014488	350.0	2.40	5.2	<0.01	0.32	6.7	0.74	357	2.73	0.16	5.1	714	1.9	<0.005
014489	419.4	2.01	4.9	<0.01	0.28	8.8	0.56	260	2.72	0.16	4.2	598	2.0	<0.005
014490	422.6	2.05	4.8	<0.01	0.30	9.2	0.47	281	3.13	0.19	4.7	639	2.1	<0.005
014491	447.4	1.76	4.1	<0.01	0.27	9.9	0.36	251	3.20	0.15	3.9	566	2.1	<0.005
014492	319.4	2.03	5.4	<0.01	0.28	7.1	0.60	277	1.31	0.20	4.8	616	2.1	<0.005
014493	795.3	1.96	5.4	<0.01	0.26	6.0	0.60	296	1.55	0.22	4.8	512	2.8	<0.005
014494	610.2	1.82	5.3	<0.01	0.24	7.8	0.54	290	1.61	0.22	5.0	565	2.7	<0.005
014495	1.3	0.08	0.1	<0.01	0.01	1.6	1.35	134	0.30	<0.01	0.3	82	0.6	<0.005
014496	269.2	2.23	5.5	<0.01	0.37	6.6	0.63	297	1.22	0.26	4.4	633	1.9	<0.005
014497	269.0	2.19	5.1	<0.01	0.36	7.2	0.60	314	1.16	0.21	4.3	581	2.5	<0.005
014498	331.1	2.38	5.5	<0.01	0.41	6.3	0.68	377	0.86	0.27	4.7	663	2.1	<0.005
014499	615.7	2.17	5.8	<0.01	0.34	6.0	0.64	365	1.01	0.28	4.7	619	2.8	<0.005
014500	291.6	2.29	6.1	<0.01	0.43	7.6	0.69	353	1.41	0.29	5.0	637	2.3	<0.005
014501	215.0	2.20	6.2	<0.01	0.41	7.2	0.70	374	0.82	0.19	4.5	659	2.7	<0.005

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TEST REPORT: YVR1910440

Project Name: Spius_2019_Submission: #2
Job Received Date: 25-Jun-2019
Job Report Date: 03-Jul-2019
Report Version: Final

Sample ID	IMS-128 Cu ppm 0.2	IMS-128 Fe % 0.01	IMS-128 Ga ppm 0.1	IMS-128 Hg ppm 0.01	IMS-128 K % 0.01	IMS-128 La ppm 0.5	IMS-128 Mg % 0.01	IMS-128 Mn ppm 5	IMS-128 Mo ppm 0.05	IMS-128 Na % 0.01	IMS-128 Ni ppm 0.1	IMS-128 P ppm 10	IMS-128 Pb ppm 0.2	IMS-128 Re ppm 0.005
014502	258.3	2.35	5.6	<0.01	0.47	6.5	0.94	458	2.98	0.16	10.7	606	1.8	<0.005
014503	535.5	2.46	6.3	<0.01	0.57	8.0	0.98	358	1.37	0.24	12.3	609	1.2	<0.005
014504	409.0	2.27	5.5	<0.01	0.53	6.9	0.85	313	1.19	0.21	10.9	573	1.3	<0.005
014505	426.8	2.50	5.9	<0.01	0.44	8.8	0.90	474	0.68	0.19	9.7	570	1.9	<0.005
014506	314.9	2.21	6.3	<0.01	0.39	11.4	0.64	421	1.01	0.18	5.6	701	2.7	<0.005
014507	702.5	2.91	7.4	<0.01	0.63	9.2	1.13	444	1.20	0.23	15.0	734	1.6	<0.005
014508	420.0	2.06	5.1	<0.01	0.35	6.6	0.60	296	1.44	0.22	4.8	597	2.0	<0.005
014509	471.9	2.53	6.7	<0.01	0.47	9.2	0.78	346	1.82	0.17	14.2	746	2.4	<0.005
014509PD	474.4	2.48	6.5	<0.01	0.45	8.6	0.78	346	1.68	0.14	14.9	742	2.5	<0.005
014510	3510.8	4.09	5.7	0.05	1.28	8.2	2.66	284	260.60	0.10	213.7	1017	21.1	0.307
014511	241.1	2.89	7.1	<0.01	0.62	6.6	1.28	478	0.90	0.31	15.2	757	1.6	<0.005
014512	766.2	1.74	6.0	<0.01	0.34	6.3	0.80	312	2.22	0.22	6.7	509	3.3	<0.005
014513	807.2	1.80	5.5	<0.01	0.35	6.8	0.57	285	1.32	0.22	5.5	486	3.5	<0.005
014514	408.7	0.45	2.1	<0.01	0.11	4.1	0.17	123	3.44	0.14	3.0	110	5.4	<0.005
014515	445.7	2.30	5.4	<0.01	0.43	7.6	0.67	357	2.24	0.16	4.9	720	1.9	<0.005
014516	805.4	2.55	5.8	<0.01	0.45	6.1	0.89	365	5.96	0.19	6.3	828	2.1	<0.005
014517	910.1	2.38	5.9	<0.01	0.37	6.3	0.78	347	5.26	0.17	5.5	707	2.6	<0.005
014518	471.4	2.50	5.2	<0.01	0.38	7.5	0.65	355	2.30	0.16	4.9	723	2.0	<0.005
014519	513.7	2.27	5.4	<0.01	0.33	6.9	0.69	328	1.83	0.16	4.7	654	2.1	<0.005
014520	566.2	2.02	4.7	<0.01	0.32	4.6	0.63	290	1.78	0.15	4.4	574	2.1	<0.005
014521	188.8	1.82	4.1	<0.01	0.22	4.0	0.56	260	1.62	0.15	4.0	528	2.1	<0.005
014522	230.1	0.88	3.3	<0.01	0.15	6.3	0.38	216	1.97	0.13	11.6	285	4.5	<0.005
014523	488.8	1.91	4.4	<0.01	0.29	6.4	0.54	286	1.84	0.14	3.9	550	2.2	<0.005
014524	779.9	2.13	5.0	<0.01	0.37	4.9	0.64	327	1.92	0.16	4.6	581	2.0	<0.005
014525	1.2	0.09	0.1	<0.01	<0.01	1.5	1.57	117	0.05	<0.01	0.3	75	0.3	<0.005

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TEST REPORT: YVR1910440

Project Name: Spius_2019_Submission: #2
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Sample ID	IMS-128 Cu ppm 0.2	IMS-128 Fe % 0.01	IMS-128 Ga ppm 0.1	IMS-128 Hg ppm 0.01	IMS-128 K % 0.01	IMS-128 La ppm 0.5	IMS-128 Mg % 0.01	IMS-128 Mn ppm 5	IMS-128 Mo ppm 0.05	IMS-128 Na % 0.01	IMS-128 Ni ppm 0.1	IMS-128 P ppm 10	IMS-128 Pb ppm 0.2	IMS-128 Re ppm 0.005
DUP 014429	423.4	2.02	5.5	<0.01	0.40	4.4	0.59	417	3.53	0.15	4.5	600	2.2	<0.005
DUP 014516	804.4	2.56	6.1	<0.01	0.46	6.6	0.90	371	6.13	0.20	6.4	816	2.1	<0.005
STD BLANK	<0.2	<0.01	<0.1	<0.01	<0.01	<0.5	<0.01	<5	<0.05	<0.01	<0.1	<10	<0.2	<0.005
STD BLANK	<0.2	<0.01	<0.1	<0.01	<0.01	<0.5	<0.01	<5	<0.05	<0.01	<0.1	<10	<0.2	<0.005
STD OREAS 25a	24.2	6.25	19.9	0.06	0.13	12.9	0.21	444	1.65	0.04	27.3	406	20.7	<0.005
STD OREAS 600	472.6	2.24	4.4	0.26	0.20	18.6	0.32	667	1.95	0.06	16.1	493	153.7	<0.005

***Please refer to the cover page for comments regarding this test report. ***

MSALABS
Unit 1, 20120 102nd Avenue
Langley, BC V1M 4B4
Phone: +1-604-888-0875

To: **Pacific Ridge Exploration Ltd**
Suite 1100, 1111 Melville Steet
Vancouver, BC V6E 3V6
Canada

TEST REPORT: YVR1910440

Project Name: Spius_2019_Submission: #2
Job Received Date: 25-Jun-2019
Job Report Date: 03-Jul-2019
Report Version: Final

	IMS-128 S	IMS-128 Sb	IMS-128 Sc	IMS-128 Se	IMS-128 Sr	IMS-128 Te	IMS-128 Th	IMS-128 Ti	IMS-128 Tl	IMS-128 U	IMS-128 V	IMS-128 W	IMS-128 Y	IMS-128 Zn
	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
Sample ID	0.01	0.05	0.1	0.2	0.5	0.05	0.2	0.005	0.05	0.05	1	0.05	0.5	2
Granite Blank	0.02	<0.05	2.7	<0.2	25.6	<0.05	2.1	0.089	<0.05	0.45	24	0.45	9.5	32
Granite Blank	0.02	<0.05	3.0	<0.2	26.6	<0.05	2.2	0.096	<0.05	0.46	25	0.47	9.7	31
014405	1.53	<0.05	1.4	0.5	102.9	<0.05	2.7	0.014	0.08	2.49	13	0.78	5.6	68
014406	1.51	0.06	1.8	0.5	58.3	0.06	2.1	0.060	0.10	2.70	20	0.71	5.3	123
014407	0.94	0.07	2.1	0.3	64.4	<0.05	1.1	0.096	0.08	1.24	30	0.53	4.9	151
014408	0.88	0.07	2.3	0.3	60.7	<0.05	1.4	0.122	0.13	0.88	32	0.66	3.8	62
014409	2.61	0.07	0.9	0.9	158.7	<0.05	1.5	0.007	0.06	1.43	10	0.64	4.3	177
014410	0.92	0.06	2.9	0.3	106.4	<0.05	1.4	0.090	0.12	1.14	31	0.59	4.4	70
014411	0.01	<0.05	0.2	<0.2	76.5	<0.05	<0.2	<0.005	<0.05	0.30	2	0.22	3.2	<2
014412	0.70	0.07	2.6	0.3	136.0	<0.05	1.2	0.064	0.12	1.65	30	0.42	4.6	59
014413	0.73	0.06	2.6	0.3	65.9	<0.05	1.1	0.104	0.14	1.32	34	0.63	4.0	67
014414	1.21	0.06	2.2	0.4	72.3	0.06	0.9	0.064	0.10	0.96	29	0.67	4.0	60
014415	1.37	0.05	1.8	0.6	72.1	0.06	1.4	0.037	0.08	1.87	22	0.74	4.6	195
014416	1.60	0.07	1.9	0.6	114.8	<0.05	1.4	0.049	0.09	2.81	23	0.84	5.0	54
014417	1.12	<0.05	2.2	0.4	108.1	0.05	1.1	0.042	0.11	1.22	25	0.67	6.0	60
014418	1.20	0.05	2.2	0.7	71.3	0.06	0.7	0.068	0.10	0.64	31	0.73	4.9	66
014419	1.09	0.05	1.9	0.4	112.9	<0.05	1.0	0.039	0.10	1.26	24	0.72	4.7	74
014420	1.19	<0.05	1.8	0.4	91.9	0.05	1.2	0.044	0.10	1.07	24	0.70	4.2	53
014420PD	1.20	<0.05	1.8	0.4	91.9	0.05	1.2	0.045	0.10	1.21	25	0.63	4.1	54
014421	2.38	6.66	7.1	3.0	76.9	1.14	1.6	0.161	0.79	0.50	79	5.03	7.5	164
014422	0.86	<0.05	3.1	0.4	53.8	<0.05	0.7	0.134	0.12	0.55	40	0.79	4.3	80
014423	0.78	<0.05	5.3	0.4	60.8	<0.05	0.8	0.173	0.16	0.81	52	0.75	5.8	114
014424	0.35	0.17	2.8	<0.2	53.3	<0.05	1.4	0.098	0.12	1.78	32	0.71	5.5	61
014425	0.58	0.20	3.1	0.3	49.8	<0.05	1.0	0.125	0.14	0.91	39	0.66	4.7	99
014426	0.53	<0.05	3.1	0.3	58.5	<0.05	0.8	0.121	0.12	0.46	41	0.73	4.6	68

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Canada

TEST REPORT: YVR1910440

Project Name: Spius_2019_Submission: #2
Job Received Date: 25-Jun-2019
Job Report Date: 03-Jul-2019
Report Version: Final

Sample ID	IMS-128 S % 0.01	IMS-128 Sb ppm 0.05	IMS-128 Sc ppm 0.1	IMS-128 Se ppm 0.2	IMS-128 Sr ppm 0.5	IMS-128 Te ppm 0.05	IMS-128 Th ppm 0.2	IMS-128 Ti % 0.005	IMS-128 Tl ppm 0.05	IMS-128 U ppm 0.05	IMS-128 V ppm 1	IMS-128 W ppm 0.05	IMS-128 Y ppm 0.5	IMS-128 Zn ppm 2
014427	0.54	0.83	2.3	0.3	196.1	0.08	1.0	0.040	0.08	1.85	26	0.68	4.1	42
014428	1.84	8.55	3.4	1.2	357.9	0.22	1.2	0.036	0.10	0.86	42	0.59	6.9	98
014429	0.59	0.36	3.2	0.3	69.6	0.07	1.0	0.120	0.12	1.55	41	0.79	4.8	90
014430	0.51	<0.05	3.6	0.4	60.5	<0.05	0.6	0.155	0.12	0.64	48	0.74	4.2	97
014431	<0.01	<0.05	0.1	<0.2	82.5	<0.05	<0.2	<0.005	<0.05	0.15	2	<0.05	2.9	2
014432	0.78	<0.05	2.9	0.4	89.5	0.05	0.8	0.096	0.13	0.59	39	0.51	4.4	171
014433	0.38	0.10	2.9	0.3	114.0	<0.05	1.3	0.070	0.16	1.51	28	0.56	5.7	68
014434	0.40	0.63	1.3	0.3	363.7	0.06	2.0	0.009	0.05	2.27	9	0.57	3.9	42
014435	0.61	0.12	3.3	0.4	365.2	0.05	1.3	0.082	0.12	0.52	37	0.57	6.3	80
014436	0.96	0.06	2.4	0.5	88.5	0.07	1.0	0.071	0.10	1.16	30	0.63	4.6	103
014437	0.42	0.05	3.4	0.3	56.7	<0.05	0.9	0.136	0.13	0.97	42	0.84	4.5	68
014488	0.05	0.05	4.8	<0.2	36.1	0.05	1.6	0.131	0.09	0.56	60	2.44	8.4	57
014489	0.04	<0.05	4.0	<0.2	32.2	<0.05	1.7	0.092	0.07	0.51	40	0.64	8.0	41
014490	0.13	0.06	3.9	0.2	36.3	0.11	1.5	0.061	0.07	0.54	37	1.62	9.1	50
014491	0.08	0.05	3.5	<0.2	29.6	0.06	1.7	0.059	0.06	0.43	33	0.51	7.3	38
014492	0.03	0.10	4.0	<0.2	39.2	0.07	1.5	0.087	0.06	0.55	45	0.09	8.2	41
014493	0.06	0.14	3.9	0.3	40.6	0.10	1.3	0.114	0.06	0.50	42	0.85	7.8	54
014494	0.06	0.13	4.0	0.2	39.9	0.07	1.5	0.073	0.05	0.41	39	0.18	8.3	53
014495	<0.01	<0.05	0.2	<0.2	91.3	<0.05	<0.2	<0.005	<0.05	0.11	2	<0.05	3.1	<2
014496	0.03	0.08	4.9	<0.2	51.0	<0.05	1.3	0.157	0.08	0.38	50	0.09	7.2	45
014497	0.12	0.17	4.4	<0.2	45.7	<0.05	1.4	0.115	0.08	0.43	44	0.30	7.2	44
014498	0.01	0.08	4.8	<0.2	55.0	<0.05	1.2	0.168	0.09	0.44	54	0.12	7.2	52
014499	0.04	0.12	4.9	<0.2	58.4	<0.05	1.1	0.156	0.08	0.54	52	0.24	7.4	58
014500	0.10	0.07	5.0	<0.2	61.2	<0.05	1.4	0.162	0.09	0.56	52	0.29	7.4	50
014501	0.09	0.09	4.5	<0.2	113.8	<0.05	1.3	0.068	0.09	0.49	45	0.10	7.2	46

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To: **Pacific Ridge Exploration Ltd**
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Vancouver, BC V6E 3V6
Canada

TEST REPORT: YVR1910440

Project Name: Spius_2019_Submission: #2
Job Received Date: 25-Jun-2019
Job Report Date: 03-Jul-2019
Report Version: Final

Sample ID	IMS-128 S % 0.01	IMS-128 Sb ppm 0.05	IMS-128 Sc ppm 0.1	IMS-128 Se ppm 0.2	IMS-128 Sr ppm 0.5	IMS-128 Te ppm 0.05	IMS-128 Th ppm 0.2	IMS-128 Ti % 0.005	IMS-128 Tl ppm 0.05	IMS-128 U ppm 0.05	IMS-128 V ppm 1	IMS-128 W ppm 0.05	IMS-128 Y ppm 0.5	IMS-128 Zn ppm 2
014502	0.09	0.12	5.7	<0.2	101.8	<0.05	1.8	0.065	0.09	0.70	54	0.13	5.5	42
014503	0.09	0.06	6.0	0.2	70.9	<0.05	2.0	0.104	0.12	0.67	58	0.05	5.8	45
014504	0.08	0.61	5.7	0.2	64.5	<0.05	1.9	0.092	0.12	0.64	54	<0.05	5.3	40
014505	0.11	0.11	7.1	0.3	64.1	<0.05	2.3	0.086	0.10	1.89	59	0.07	8.9	50
014506	0.09	0.16	5.2	<0.2	75.8	<0.05	2.0	0.073	0.09	0.59	50	0.14	8.8	47
014507	0.11	0.06	7.1	0.3	71.8	<0.05	1.7	0.141	0.12	0.51	74	0.08	8.5	63
014508	0.10	0.07	4.5	0.2	50.8	0.06	1.2	0.099	0.08	0.50	45	0.08	7.6	44
014509	0.11	0.08	5.8	<0.2	60.2	0.06	1.5	0.095	0.10	1.33	57	0.10	9.9	54
014509PD	0.12	0.07	5.7	0.2	56.5	<0.05	1.4	0.093	0.10	1.27	57	0.11	9.6	55
014510	2.40	6.88	8.0	3.1	83.4	1.11	1.6	0.165	0.80	0.51	91	5.06	7.8	169
014511	0.04	0.12	7.8	<0.2	99.2	<0.05	1.5	0.217	0.13	0.65	83	0.16	6.7	62
014512	0.12	0.12	4.5	0.3	54.1	0.10	1.7	0.111	0.07	1.00	46	0.34	7.1	55
014513	0.10	0.09	4.0	0.3	49.7	<0.05	1.3	0.086	0.08	3.11	42	0.14	7.9	46
014514	0.06	0.06	0.9	<0.2	30.1	<0.05	1.1	0.007	<0.05	2.44	8	0.70	3.2	16
014515	0.07	<0.05	4.6	0.2	35.5	0.07	1.3	0.147	0.10	0.75	53	0.55	7.1	60
014516	0.04	0.05	6.1	0.2	43.4	0.06	1.0	0.147	0.11	0.65	68	0.57	8.6	67
014517	0.07	0.07	5.4	0.3	35.1	0.25	1.2	0.147	0.09	0.62	60	0.62	8.1	59
014518	0.10	0.05	4.9	0.3	36.3	<0.05	1.2	0.128	0.08	0.66	53	0.53	7.6	55
014519	0.03	<0.05	4.9	<0.2	30.2	0.08	1.2	0.134	0.07	0.46	54	0.56	9.3	52
014520	0.06	<0.05	4.6	0.2	33.2	0.12	1.0	0.140	0.07	0.46	48	0.62	6.0	44
014521	0.08	<0.05	3.3	<0.2	34.7	0.08	0.8	0.114	<0.05	0.33	41	0.61	4.7	37
014522	0.03	<0.05	2.7	<0.2	71.2	<0.05	1.9	0.020	<0.05	0.47	21	0.55	4.1	27
014523	0.23	<0.05	3.3	0.4	33.5	0.14	1.2	0.086	0.07	1.05	37	0.54	6.1	41
014524	0.07	0.08	5.2	0.3	36.3	0.06	1.0	0.145	0.09	0.55	50	0.62	7.3	47
014525	<0.01	<0.05	0.1	<0.2	81.0	<0.05	<0.2	<0.005	<0.05	0.10	2	<0.05	2.9	<2

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TEST REPORT: YVR1910440

Project Name: Spius_2019_Submission: #2
Job Received Date: 25-Jun-2019
Job Report Date: 03-Jul-2019
Report Version: Final

Sample ID	IMS-128 S % 0.01	IMS-128 Sb ppm 0.05	IMS-128 Sc ppm 0.1	IMS-128 Se ppm 0.2	IMS-128 Sr ppm 0.5	IMS-128 Te ppm 0.05	IMS-128 Th ppm 0.2	IMS-128 Ti % 0.005	IMS-128 Tl ppm 0.05	IMS-128 U ppm 0.05	IMS-128 V ppm 1	IMS-128 W ppm 0.05	IMS-128 Y ppm 0.5	IMS-128 Zn ppm 2
DUP 014429	0.58	0.34	3.3	0.3	68.0	<0.05	1.0	0.119	0.12	1.65	41	0.76	4.7	87
DUP 014516	0.04	0.06	6.2	<0.2	46.2	0.09	1.0	0.150	0.11	0.65	68	0.57	9.0	67
STD BLANK	<0.01	<0.05	<0.1	<0.2	<0.5	<0.05	<0.2	<0.005	<0.05	<0.05	<1	<0.05	<0.5	<2
STD BLANK	<0.01	<0.05	<0.1	<0.2	<0.5	<0.05	<0.2	<0.005	<0.05	<0.05	<1	<0.05	<0.5	<2
STD OREAS 25a	0.05	0.27	9.4	0.7	18.0	<0.05	10.4	0.052	0.20	1.48	124	<0.05	4.6	31
STD OREAS 600	1.60	13.54	1.9	6.9	38.1	6.69	4.9	<0.005	0.58	0.97	13	0.60	6.2	600

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To: **Pacific Ridge Exploration Ltd**
Suite 1100, 1111 Melville Steet
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Canada

TEST REPORT:	**YVR1910457**

Project Name:	Spius_2019_Submission: #3
Job Received Date:	02-Jul-2019
Job Report Date:	22-Jul-2019
Number of Samples:	183
Report Version:	Final

COMMENTS:

Test results reported relate to the tested samples only on an “as received” basis. Unless otherwise stated above, sufficient sample was received for the methods requested and all samples were received in acceptable condition. Analytical results in unsigned reports marked "provisional" are subject to change, pending final QC review and approval. The customer has not provided any information than can affect the validity of the test results. Please refer to MSALABS' Schedule of Services and Fees for our complete Terms and Conditions. Preliminary results are applicable when a portion of samples in a job is 100% completed and reported or 1 of a number of methods on the same job have been completed 100%. Results cannot change, but additional results or results for additional methods can be added.

SAMPLE PREPARATION	
METHOD CODE	DESCRIPTION
PRP-910	Dry, Crush to 70% passing 2mm, Split 250g, Pulverize to 85% passing 75µm

ANALYTICAL METHODS	
METHOD CODE	DESCRIPTION
IMS-128	Multi-Element (39 elements), 20g, 3:1 Aqua Regia, ICP-AES/MS, Ultra Trace Level

Signature:

Yvette Hsi, BSc.
Laboratory Manager
MSALABS

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TEST REPORT: YVR1910457

Project Name: Spius_2019_Submission: #3
Job Received Date: 02-Jul-2019
Job Report Date: 22-Jul-2019
Report Version: Final

Sample ID	Sample Type	PWE-100 Rec. Wt. kg 0.01	Method Analyte Units LOR	IMS-128 Ag ppm 0.05	IMS-128 Al % 0.01	IMS-128 As ppm 0.2	IMS-128 Au ppm 0.001	IMS-128 B ppm 10	IMS-128 Ba ppm 10	IMS-128 Bi ppm 0.05	IMS-128 Ca % 0.01	IMS-128 Cd ppm 0.05	IMS-128 Co ppm 0.1	IMS-128 Cr ppm 1
Granite Blank	QC-P-BK	--		<0.05	0.97	0.9	<0.001	<10	68	<0.05	0.65	<0.05	4.3	44
Granite Blank	QC-P-BK	--		<0.05	0.91	0.8	<0.001	<10	73	<0.05	0.63	<0.05	3.9	57
014251	Core	4.57		<0.05	1.07	1.3	<0.001	<10	384	0.13	0.64	<0.05	5.7	56
014252	Core	3.54		0.11	0.91	6.4	<0.001	<10	214	1.30	1.60	<0.05	5.6	55
014253	Core	6.68		0.05	1.09	2.3	0.001	<10	208	0.34	0.84	<0.05	6.3	52
014254	Core	7.18		0.07	0.74	1.6	0.001	<10	124	0.28	0.49	<0.05	4.0	61
014255	Core	4.75		0.17	1.40	1.4	0.001	10	128	0.37	1.27	0.13	9.6	49
014256	Core	2.89		0.19	1.57	0.8	<0.001	<10	179	0.20	1.18	0.08	10.4	57
014257	Core	4.84		0.12	0.58	2.6	0.002	<10	66	0.45	1.42	0.13	4.2	79
014258	Core	3.18		0.11	1.35	0.6	<0.001	<10	148	0.32	1.04	0.06	8.8	63
014259	Core	4.97		0.09	1.28	0.7	<0.001	<10	210	0.10	0.96	<0.05	7.9	69
014259PD	QC-PD	--		0.10	1.24	0.8	<0.001	<10	172	0.11	1.01	<0.05	8.5	62
014260	Core	4.64		0.10	1.27	0.6	<0.001	<10	179	0.20	1.06	0.05	8.1	60
014261	Rock	1.64		<0.05	<0.01	0.4	<0.001	<10	<10	<0.05	>25	<0.05	0.3	7
014262	Core	5.31		0.10	1.39	1.9	0.001	<10	210	0.22	1.01	0.13	7.9	62
014263	Core	4.36		0.15	1.24	1.4	0.002	<10	80	0.49	1.82	0.45	8.1	65
014264	Core	4.54		0.12	1.27	0.9	0.001	<10	181	0.22	1.01	0.18	7.5	75
014265	Core	4.94		0.12	1.43	0.8	<0.001	<10	237	0.17	0.98	<0.05	8.6	58
014266	Core	4.79		0.06	1.29	0.7	<0.001	<10	282	0.12	0.80	<0.05	7.5	63
014267	Core	5.07		0.10	1.15	1.5	<0.001	<10	161	0.38	1.21	0.06	7.5	57
014268	Core	4.33		<0.05	1.28	0.7	<0.001	<10	404	<0.05	0.76	<0.05	7.6	63
014269	Core	5.10		0.09	1.42	1.0	<0.001	<10	340	0.06	0.92	<0.05	8.8	58
014270	Core	4.67		0.11	1.42	1.3	0.001	11	266	0.05	1.37	0.06	8.1	51
014271	Pulp	0.10		1.21	2.13	40.7	0.153	11	64	0.56	1.09	1.06	14.8	16
014272	Core	5.16		0.10	1.17	1.3	<0.001	<10	333	0.15	1.32	0.11	7.1	41

***Please refer to the cover page for comments regarding this test report. ***

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To: **Pacific Ridge Exploration Ltd**
Suite 1100, 1111 Melville Steet
Vancouver, BC V6E 3V6
Canada

TEST REPORT: YVR1910457

Project Name: Spius_2019_Submission: #3
Job Received Date: 02-Jul-2019
Job Report Date: 22-Jul-2019
Report Version: Final

Sample ID	Sample Type	PWE-100 Rec. Wt. kg 0.01	Method Analyte Units LOR	IMS-128 Ag ppm 0.05	IMS-128 Al % 0.01	IMS-128 As ppm 0.2	IMS-128 Au ppm 0.001	IMS-128 B ppm 10	IMS-128 Ba ppm 10	IMS-128 Bi ppm 0.05	IMS-128 Ca % 0.01	IMS-128 Cd ppm 0.05	IMS-128 Co ppm 0.1	IMS-128 Cr ppm 1
014273	Core	4.64		0.16	0.85	2.7	0.002	<10	83	0.46	1.28	0.32	5.5	41
014274	Core	5.04		0.08	1.53	1.7	<0.001	<10	238	0.10	2.01	0.07	7.3	36
014275	Core	5.19		0.08	1.08	7.4	<0.001	<10	360	0.17	1.04	0.19	5.6	56
014276	Core	3.30		0.10	0.49	1.5	<0.001	<10	123	0.26	0.72	0.09	2.5	62
014277	Core	4.89		<0.05	1.09	0.6	<0.001	<10	117	0.10	0.89	<0.05	7.2	62
014278	Core	6.60		0.15	1.58	0.7	<0.001	<10	306	0.10	0.99	<0.05	9.4	48
014279	Core	7.44		0.17	1.20	1.3	<0.001	<10	201	0.58	0.95	0.42	7.1	57
014280	Core	4.01		0.77	1.34	8.0	0.017	<10	119	0.15	1.16	0.48	7.8	45
014281	Rock	1.32		<0.05	<0.01	<0.2	<0.001	<10	<10	<0.05	>25	<0.05	0.2	5
014438	Core	1.96		0.09	1.10	0.7	<0.001	<10	237	<0.05	0.41	0.10	5.4	52
014438PD	QC-PD	--		0.09	1.15	0.6	<0.001	<10	225	<0.05	0.52	0.08	6.0	46
014439	Core	2.44		0.22	0.88	1.2	<0.001	<10	308	0.08	0.29	0.11	3.9	45
014440	Core	5.02		0.46	0.85	1.3	0.002	<10	216	0.42	0.26	0.13	4.7	50
014441	Pulp	0.14		1.18	2.11	41.3	0.155	<10	60	0.56	1.11	1.07	14.5	15
014442	Core	3.00		0.25	1.23	5.7	0.001	<10	244	0.29	0.43	0.38	8.2	49
014443	Core	4.56		0.50	0.92	3.6	0.002	<10	250	0.38	0.39	0.21	5.8	47
014444	Core	2.97		0.66	0.76	5.4	0.003	<10	179	0.49	0.98	0.21	5.6	42
014445	Core	2.12		0.32	0.76	1.3	0.001	<10	258	0.19	0.69	0.11	5.6	57
014446	Core	5.39		0.20	1.21	0.9	0.001	<10	249	0.07	0.65	0.06	7.5	48
014447	Core	6.89		0.26	1.21	2.3	0.001	<10	182	0.07	0.60	0.06	8.0	48
014448	Core	8.03		0.16	1.24	2.6	0.002	<10	238	<0.05	0.61	<0.05	8.0	51
014449	Core	6.92		0.12	1.21	2.5	0.001	<10	188	<0.05	0.64	<0.05	8.4	47
014450	Core	6.96		0.17	1.23	1.8	0.001	<10	205	<0.05	0.66	<0.05	8.5	48
014451	Rock	1.30		<0.05	<0.01	<0.2	<0.001	<10	<10	<0.05	>25	<0.05	0.3	5
014452	Core	6.54		0.18	1.22	1.0	0.001	<10	222	<0.05	0.78	<0.05	7.8	48

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TEST REPORT: YVR1910457

Project Name: Spius_2019_Submission: #3
Job Received Date: 02-Jul-2019
Job Report Date: 22-Jul-2019
Report Version: Final

Sample ID	Sample Type	PWE-100 Rec. Wt. kg 0.01	Method Analyte Units LOR	IMS-128 Ag ppm 0.05	IMS-128 Al % 0.01	IMS-128 As ppm 0.2	IMS-128 Au ppm 0.001	IMS-128 B ppm 10	IMS-128 Ba ppm 10	IMS-128 Bi ppm 0.05	IMS-128 Ca % 0.01	IMS-128 Cd ppm 0.05	IMS-128 Co ppm 0.1	IMS-128 Cr ppm 1
014453	Core	6.97		0.19	0.99	9.2	0.001	<10	226	0.06	1.11	<0.05	7.8	44
014454	Core	7.48		0.37	1.10	1.2	0.002	<10	201	0.12	0.83	0.12	8.1	45
014455	Core	7.79		0.07	1.17	1.2	<0.001	<10	197	<0.05	0.78	<0.05	7.5	47
014456	Core	7.43		0.17	0.77	6.8	<0.001	<10	242	0.07	1.61	0.10	6.3	43
014457	Core	8.34		0.17	1.20	1.0	<0.001	<10	206	0.06	1.02	<0.05	6.7	48
014458	Core	6.34		0.09	1.15	0.9	<0.001	<10	207	0.10	1.03	<0.05	7.0	48
014459	Core	6.47		0.32	1.22	0.8	0.001	<10	250	0.10	1.06	0.08	7.2	46
014460	Core	5.61		0.24	1.25	0.8	<0.001	<10	275	<0.05	0.96	0.06	7.4	46
014461	Pulp	0.13		2.31	1.88	26.6	0.020	<10	81	1.93	1.07	0.93	33.7	175
014462	Core	6.51		0.57	1.13	2.0	0.004	<10	132	0.13	0.68	0.14	8.2	49
014463	Core	9.47		0.38	1.17	1.8	0.002	<10	185	0.17	0.91	0.07	7.9	45
014464	Core	7.20		0.12	1.35	11.4	0.002	<10	267	<0.05	1.61	<0.05	6.8	131
014465	Core	7.13		0.27	1.33	2.3	0.001	<10	206	<0.05	1.46	0.05	5.8	139
014466	Core	7.24		0.41	1.43	12.4	0.002	<10	220	0.07	1.85	0.10	6.6	103
014467	Core	7.37		0.34	1.24	2.3	0.002	<10	196	0.07	1.36	0.10	7.1	149
014468	Core	8.13		0.30	1.24	1.1	0.002	<10	193	0.06	1.26	0.07	7.2	141
014469	Core	7.25		0.28	1.30	1.8	0.002	<10	180	<0.05	1.09	0.07	7.6	133
014470	Core	2.56		0.06	1.25	1.0	<0.001	<10	176	<0.05	0.93	<0.05	7.0	171
014471	Rock	1.48		<0.05	<0.01	<0.2	<0.001	<10	<10	<0.05	>25	<0.05	0.8	5
014472	Core	5.04		0.29	0.97	0.9	0.002	<10	236	0.13	1.05	0.08	5.6	145
014473	Core	5.71		0.17	1.43	2.3	<0.001	<10	241	<0.05	1.34	<0.05	6.3	149
014474	Core	6.87		0.30	1.50	1.9	0.002	<10	178	0.05	1.17	0.10	8.2	160
014475	Core	7.28		0.16	1.53	1.4	0.001	<10	191	<0.05	1.05	<0.05	8.6	154
014476	Core	6.50		0.11	1.54	2.5	<0.001	<10	191	<0.05	1.17	<0.05	8.3	152
014477	Core	6.61		1.06	1.49	1.5	0.002	<10	183	0.05	1.04	0.11	7.3	155

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Canada

TEST REPORT: YVR1910457

Project Name: Spius_2019_Submission: #3
Job Received Date: 02-Jul-2019
Job Report Date: 22-Jul-2019
Report Version: Final

Sample ID	Sample Type	PWE-100 Rec. Wt. kg 0.01	Method Analyte Units LOR	IMS-128 Ag ppm 0.05	IMS-128 Al % 0.01	IMS-128 As ppm 0.2	IMS-128 Au ppm 0.001	IMS-128 B ppm 10	IMS-128 Ba ppm 10	IMS-128 Bi ppm 0.05	IMS-128 Ca % 0.01	IMS-128 Cd ppm 0.05	IMS-128 Co ppm 0.1	IMS-128 Cr ppm 1
014478	Core	2.63		0.07	1.52	0.8	<0.001	<10	220	<0.05	1.14	<0.05	7.4	134
014479	Core	4.22		<0.05	1.42	1.8	<0.001	<10	885	0.10	1.68	<0.05	4.8	99
014480	Core	5.28		0.06	1.23	1.6	<0.001	<10	906	0.13	1.28	<0.05	4.5	103
014481	Pulp	0.13		1.26	2.32	41.9	0.175	<10	67	0.58	1.11	1.07	14.9	16
014482	Core	3.21		0.06	1.27	1.0	<0.001	<10	814	0.15	1.28	<0.05	4.6	27
014483	Core	5.10		0.07	1.41	1.2	0.001	<10	1140	0.19	1.72	<0.05	4.9	23
014484	Core	1.41		0.53	1.28	1.1	0.003	<10	343	0.19	1.37	0.23	7.3	58
014485	Core	5.89		0.43	1.33	1.7	0.002	<10	197	0.27	1.27	0.30	7.6	65
014486	Core	6.71		0.23	1.40	2.2	0.002	<10	223	0.07	1.30	0.07	7.2	69
014487	Core	6.96		0.49	1.39	2.6	0.002	<10	160	0.18	1.28	0.13	6.7	74
014526	Core	6.00		0.55	0.96	1.5	0.004	<10	280	0.14	0.32	0.13	5.0	62
014527	Core	5.02		0.29	1.30	1.1	0.003	<10	362	0.07	0.49	0.10	6.7	62
014528	Core	6.76		1.10	1.15	1.5	0.009	<10	327	0.18	0.41	0.21	7.4	63
014529	Core	6.66		0.60	1.04	1.5	0.003	<10	241	0.11	0.39	0.13	6.0	66
014529PD	QC-PD	--		0.57	1.08	1.5	0.004	<10	248	0.12	0.40	0.13	5.9	70
014530	Core	7.28		0.40	1.12	1.2	0.003	<10	313	0.09	0.40	0.11	6.1	54
014531	Core	7.47		0.77	0.91	1.3	0.004	<10	248	0.13	0.36	0.17	5.8	67
014532	Core	7.27		0.27	0.73	0.9	0.002	<10	214	0.08	0.31	0.07	3.6	65
014533	Core	5.49		0.13	1.10	0.8	<0.001	<10	371	<0.05	0.44	0.05	5.6	57
014534	Core	6.61		0.29	0.97	3.5	0.002	<10	264	0.10	0.52	0.08	5.1	64
014535	Core	7.88		0.28	0.96	2.3	0.002	<10	259	0.08	0.51	0.07	5.5	67
014536	Core	7.32		0.35	0.95	1.7	0.003	<10	280	0.10	0.50	0.08	5.0	61
014537	Core	7.53		0.40	0.88	1.0	0.003	<10	302	0.11	0.38	0.09	4.7	66
014538	Core	7.44		0.23	0.84	1.5	0.002	<10	342	0.09	0.56	0.06	4.6	64
014539	Core	7.00		0.23	0.97	1.0	0.002	<10	298	0.08	0.51	0.07	4.7	56

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Job Received Date: 02-Jul-2019
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Sample ID	Sample Type	PWE-100 Rec. Wt. kg 0.01	Method Analyte Units LOR	IMS-128 Ag ppm 0.05	IMS-128 Al % 0.01	IMS-128 As ppm 0.2	IMS-128 Au ppm 0.001	IMS-128 B ppm 10	IMS-128 Ba ppm 10	IMS-128 Bi ppm 0.05	IMS-128 Ca % 0.01	IMS-128 Cd ppm 0.05	IMS-128 Co ppm 0.1	IMS-128 Cr ppm 1
014540	Pulp	0.10		1.23	2.18	42.5	0.154	<10	62	0.58	1.06	1.10	15.0	16
014541	Core	7.25		0.68	0.69	3.1	0.002	<10	244	5.03	2.37	0.16	3.0	49
014542	Core	7.86		0.28	0.95	1.5	0.002	<10	343	0.08	0.57	0.09	4.7	59
014543	Core	7.45		0.22	0.98	2.0	0.002	<10	320	0.07	0.59	0.07	5.5	53
014544	Core	7.09		0.17	0.94	1.9	0.002	<10	332	<0.05	0.47	0.07	5.0	56
014545	Core	7.21		0.23	1.34	1.5	0.001	<10	393	0.16	0.82	0.08	6.8	50
014546	Core	7.32		0.13	1.30	1.3	0.001	<10	318	0.07	0.78	<0.05	5.8	53
014547	Core	7.67		0.20	2.20	1.1	0.002	13	312	0.08	1.43	0.07	13.5	49
014548	Core	7.41		0.18	2.28	0.9	0.001	12	321	0.09	1.37	0.07	15.3	43
014549	Core	7.30		0.44	2.28	1.7	0.003	<10	90	0.22	1.34	0.33	17.6	68
014550	Core	7.27		0.33	0.87	1.3	0.003	<10	151	0.17	0.60	0.08	4.6	59
014551	Core	6.61		0.41	0.81	1.4	0.004	<10	185	0.16	0.54	0.11	4.8	62
014552	Core	7.46		0.21	0.83	1.3	0.003	<10	158	0.07	0.48	0.06	4.6	62
014553	Core	5.99		0.23	0.87	1.0	0.002	<10	155	0.26	0.53	0.06	4.7	61
014554	Core	2.60		0.29	0.64	2.2	0.006	<10	92	0.17	0.40	0.11	3.8	62
014555	Rock	1.34		<0.05	<0.01	<0.2	<0.001	<10	12	<0.05	>25	<0.05	0.2	9
014556	Core	4.04		0.09	1.70	2.9	0.001	11	98	0.09	1.90	0.06	20.1	84
014557	Pulp	0.13		1.20	2.21	40.3	0.155	14	75	0.57	1.21	1.05	14.1	15
014558	Core	6.99		0.28	1.35	1.7	0.002	<10	204	0.09	1.32	0.09	7.3	67
014559	Core	6.79		0.79	1.19	3.0	0.003	<10	144	0.22	1.51	0.22	6.9	73
014559PD	QC-PD	--		0.74	1.17	2.8	0.004	10	147	0.20	1.49	0.23	6.5	75
014560	Core	7.11		1.23	1.16	2.8	0.005	<10	143	0.22	1.52	0.37	7.1	73
014561	Core	7.39		1.01	1.13	2.5	0.005	<10	136	0.25	1.57	0.31	7.4	77
014562	Core	7.53		0.82	1.22	5.1	0.004	11	128	0.31	1.44	0.26	7.1	76
014563	Core	7.12		0.68	1.16	1.2	0.003	10	138	0.41	1.56	0.21	6.5	70

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014564	Core	7.37		0.78	1.18	1.7	0.004	<10	153	0.29	1.60	0.22	7.0	73
014565	Core	6.96		0.76	1.15	10.5	0.004	<10	151	0.24	1.75	0.23	6.5	73
014566	Core	4.20		0.42	1.38	3.6	0.003	<10	156	0.29	1.85	0.11	9.1	75
014567	Core	3.23		0.51	0.84	1.8	0.003	<10	244	0.39	0.97	0.14	5.4	69
014568	Core	7.86		0.40	0.86	2.6	0.002	<10	284	0.17	0.94	0.12	4.9	69
014569	Core	6.99		0.40	0.82	2.4	0.003	<10	263	0.26	0.97	0.11	4.3	75
014570	Pulp	0.13		2.35	2.06	25.8	0.023	<10	113	1.91	1.15	0.89	32.3	182
014571	Core	5.39		0.63	0.74	1.9	0.003	<10	301	0.27	1.14	0.16	3.9	68
014572	Core	6.91		0.74	0.85	5.4	0.003	<10	330	0.19	1.09	0.13	4.5	62
014573	Core	6.59		0.77	0.88	1.3	0.003	<10	278	0.21	1.32	0.25	5.3	62
014574	Core	4.39		0.05	0.94	1.2	<0.001	<10	344	0.11	0.82	<0.05	5.4	57
014575	Core	4.89		0.07	0.67	3.0	<0.001	<10	216	0.22	1.03	0.09	3.7	56
014576	Core	4.58		<0.05	1.10	1.3	<0.001	<10	424	0.11	0.84	<0.05	6.3	51
014577	Core	6.62		<0.05	0.29	3.1	<0.001	<10	114	0.12	0.55	0.08	1.0	61
014578	Core	2.30		0.07	1.06	2.2	<0.001	<10	241	0.26	0.54	<0.05	5.9	51
014579	Core	4.80		0.11	1.10	2.6	0.002	<10	108	0.36	0.68	<0.05	6.4	43
014580	Core	2.63		0.09	0.88	2.1	0.002	<10	66	0.78	2.49	0.06	5.7	43
014581	Core	4.89		0.16	0.95	2.7	0.002	<10	114	2.64	0.95	0.18	5.5	44
014582	Core	1.21		0.12	1.18	0.9	<0.001	<10	183	0.73	0.55	<0.05	5.8	51
014582PD	QC-PD	--		0.11	1.10	0.9	<0.001	<10	181	0.66	0.51	<0.05	5.6	44
014583	Core	5.43		0.10	0.99	3.3	0.002	<10	140	0.63	0.73	0.06	5.1	54
014584	Core	6.90		0.07	1.04	2.8	<0.001	<10	118	0.47	0.66	0.05	5.3	50
014585	Rock	1.41		<0.05	<0.01	<0.2	<0.001	<10	11	<0.05	>25	<0.05	0.2	7
014586	Core	6.15		<0.05	0.97	2.5	<0.001	<10	175	0.19	0.65	0.09	4.2	55
014587	Core	6.68		<0.05	0.79	1.1	<0.001	<10	209	0.16	0.46	0.06	3.3	55

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To: **Pacific Ridge Exploration Ltd**
Suite 1100, 1111 Melville Steet
Vancouver, BC V6E 3V6
Canada

TEST REPORT: YVR1910457

Project Name: Spius_2019_Submission: #3
Job Received Date: 02-Jul-2019
Job Report Date: 22-Jul-2019
Report Version: Final

Sample ID	Sample Type	PWE-100 Rec. Wt. kg 0.01	Method Analyte Units LOR	IMS-128 Ag ppm 0.05	IMS-128 Al % 0.01	IMS-128 As ppm 0.2	IMS-128 Au ppm 0.001	IMS-128 B ppm 10	IMS-128 Ba ppm 10	IMS-128 Bi ppm 0.05	IMS-128 Ca % 0.01	IMS-128 Cd ppm 0.05	IMS-128 Co ppm 0.1	IMS-128 Cr ppm 1
014588	Core	7.21		<0.05	0.94	1.0	<0.001	<10	294	0.16	0.48	<0.05	4.3	51
014589	Core	6.75		<0.05	1.10	1.6	<0.001	<10	247	0.18	0.54	<0.05	5.6	47
014590	Core	2.29		<0.05	1.14	2.2	<0.001	<10	189	0.20	0.67	0.07	5.5	49
014591	Core	7.23		<0.05	1.16	1.3	<0.001	<10	293	0.10	0.48	<0.05	5.6	50
014592	Core	6.81		<0.05	1.19	1.0	<0.001	<10	414	0.10	0.96	<0.05	5.4	50
014593	Core	5.04		<0.05	1.13	0.7	<0.001	<10	378	0.12	0.54	<0.05	5.3	48
014594	Core	2.65		<0.05	1.03	0.5	<0.001	<10	326	0.10	0.44	<0.05	4.8	48
014595	Core	7.35		<0.05	1.08	1.3	<0.001	<10	381	0.08	0.86	<0.05	5.0	46
014596	Core	6.30		<0.05	1.15	1.7	<0.001	<10	277	0.21	0.65	0.07	5.3	47
014597	Core	6.99		0.06	1.10	1.0	<0.001	<10	311	0.36	0.49	<0.05	4.9	48
014598	Core	7.00		0.06	1.64	0.7	<0.001	<10	466	0.13	1.42	<0.05	6.0	128
014599	Core	5.07		0.05	1.35	0.6	<0.001	<10	472	<0.05	0.48	<0.05	5.5	131
014600	Pulp	0.13		1.25	2.26	40.9	0.258	<10	65	0.58	1.10	1.09	14.2	15
014601	Core	7.31		<0.05	1.55	0.9	<0.001	<10	514	0.08	1.10	0.15	6.0	125
014602	Core	7.46		0.05	1.52	0.7	<0.001	<10	498	0.09	0.57	<0.05	6.7	104
014603	Core	7.46		<0.05	1.44	1.0	<0.001	<10	522	0.05	0.57	<0.05	6.4	117
014604	Core	7.40		0.05	1.40	1.3	<0.001	<10	409	0.15	0.62	<0.05	5.9	125
014605	Core	5.06		0.12	1.32	2.1	0.001	<10	136	0.54	0.72	0.07	6.1	106
014605PD	QC-PD	--		0.11	1.33	2.1	0.001	<10	132	0.54	0.70	0.07	6.0	109
014606	Core	5.38		0.16	1.38	1.0	0.006	<10	378	0.16	0.66	<0.05	6.0	109
014607	Core	6.70		0.48	0.72	10.0	0.001	<10	549	3.96	0.76	3.94	0.6	127
014608	Core	5.67		0.05	1.38	0.9	<0.001	<10	486	0.10	0.52	<0.05	5.9	112
014609	Core	3.31		0.24	1.41	0.9	0.005	<10	34	1.55	2.01	<0.05	6.6	91
014610	Core	5.06		0.06	1.44	1.0	<0.001	<10	426	0.13	0.59	<0.05	5.9	114
014611	Core	7.38		0.09	1.49	0.8	<0.001	<10	364	1.23	0.69	0.19	6.6	126

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Vancouver, BC V6E 3V6
Canada

TEST REPORT: YVR1910457

Project Name: Spius_2019_Submission: #3
Job Received Date: 02-Jul-2019
Job Report Date: 22-Jul-2019
Report Version: Final

Sample ID	Sample Type	PWE-100 Rec. Wt. kg 0.01	Method Analyte Units LOR	IMS-128 Ag ppm 0.05	IMS-128 Al % 0.01	IMS-128 As ppm 0.2	IMS-128 Au ppm 0.001	IMS-128 B ppm 10	IMS-128 Ba ppm 10	IMS-128 Bi ppm 0.05	IMS-128 Ca % 0.01	IMS-128 Cd ppm 0.05	IMS-128 Co ppm 0.1	IMS-128 Cr ppm 1
014612	Core	6.97		0.07	1.32	1.1	<0.001	<10	434	0.11	0.97	<0.05	5.8	116
014613	Core	7.36		0.09	1.28	1.6	0.001	<10	242	0.16	0.86	<0.05	6.0	129
014614	Core	7.77		0.06	1.33	1.2	<0.001	<10	304	0.09	0.89	<0.05	6.3	147
014615	Rock	1.63		<0.05	0.02	0.3	<0.001	<10	10	<0.05	>25	<0.05	0.2	6
014616	Core	7.12		0.13	1.55	2.0	<0.001	<10	232	<0.05	0.79	<0.05	8.5	112
014617	Core	7.18		0.17	1.49	2.9	0.001	<10	254	<0.05	0.78	<0.05	8.0	109
014618	Core	6.65		0.18	1.47	2.5	<0.001	<10	257	0.10	0.91	<0.05	7.3	112
014619	Core	6.85		0.23	1.51	3.1	0.001	<10	251	0.08	0.80	0.06	7.9	108
014620	Core	7.45		0.11	1.41	1.6	0.002	<10	285	<0.05	1.12	<0.05	7.3	115
014621	Core	7.18		0.22	1.49	7.5	<0.001	<10	300	<0.05	1.44	<0.05	6.0	104
014622	Core	7.25		0.12	1.37	0.9	<0.001	<10	226	<0.05	0.84	<0.05	5.4	126
014623	Core	6.45		0.14	1.48	2.5	<0.001	<10	228	0.10	0.79	<0.05	7.4	116
014624	Core	7.17		0.14	1.46	2.7	<0.001	<10	149	<0.05	0.88	<0.05	5.6	110
014625	Pulp	0.13		2.31	1.99	25.8	0.030	<10	101	1.66	1.12	0.92	34.9	181
014626	Core	6.52		0.35	1.03	1.2	0.001	<10	449	0.07	1.13	0.09	4.6	147
014626PD	QC-PD	--		0.37	1.03	1.2	0.001	<10	433	0.07	1.14	0.08	4.7	138
014627	Core	8.12		0.25	0.90	1.2	<0.001	<10	245	0.05	0.67	0.06	3.9	148

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TEST REPORT: YVR1910457

Project Name: Spius_2019_Submission: #3
Job Received Date: 02-Jul-2019
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Sample ID	Sample Type	PWE-100 Rec. Wt. kg 0.01	Method Analyte Units LOR	IMS-128 Ag ppm 0.05	IMS-128 Al % 0.01	IMS-128 As ppm 0.2	IMS-128 Au ppm 0.001	IMS-128 B ppm 10	IMS-128 Ba ppm 10	IMS-128 Bi ppm 0.05	IMS-128 Ca % 0.01	IMS-128 Cd ppm 0.05	IMS-128 Co ppm 0.1	IMS-128 Cr ppm 1
DUP 014267				0.10	1.14	1.5	<0.001	<10	168	0.39	1.22	0.06	7.7	56
DUP 014458				0.08	1.13	0.8	<0.001	<10	205	0.09	1.04	<0.05	6.8	45
DUP 014483				0.08	1.39	1.3	0.001	<10	1137	0.19	1.73	<0.05	5.0	23
DUP 014554				0.30	0.65	2.2	0.006	<10	90	0.17	0.41	0.11	3.7	62
DUP 014586				<0.05	0.97	2.5	<0.001	<10	172	0.19	0.64	0.10	4.2	55
STD BLANK				<0.05	<0.01	<0.2	<0.001	<10	<10	<0.05	<0.01	<0.05	<0.1	<1
STD BLANK				<0.05	<0.01	<0.2	<0.001	<10	<10	<0.05	<0.01	<0.05	<0.1	<1
STD BLANK				<0.05	<0.01	<0.2	<0.001	<10	<10	<0.05	<0.01	<0.05	<0.1	<1
STD BLANK				<0.05	<0.01	<0.2	<0.001	<10	<10	<0.05	<0.01	<0.05	<0.1	<1
STD BLANK				<0.05	<0.01	<0.2	<0.001	<10	<10	<0.05	<0.01	<0.05	<0.1	<1
STD OREAS 25a				<0.05	5.86	2.8	<0.001	14	58	0.29	0.16	<0.05	5.8	77
STD OREAS 600				24.72	1.04	87.1	0.194	<10	56	6.97	1.75	3.37	7.0	23
STD OREAS 25a				<0.05	5.70	2.6	<0.001	<10	56	0.30	0.15	<0.05	5.8	72
STD OREAS 600				24.15	1.01	81.2	0.184	<10	69	6.03	1.79	3.37	6.8	23
STD OREAS 25a				<0.05	5.99	2.6	<0.001	12	58	0.30	0.16	<0.05	5.5	70

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Canada

TEST REPORT: YVR1910457

Project Name: Spius_2019_Submission: #3
Job Received Date: 02-Jul-2019
Job Report Date: 22-Jul-2019
Report Version: Final

Sample ID	IMS-128 Cu ppm 0.2	IMS-128 Fe % 0.01	IMS-128 Ga ppm 0.1	IMS-128 Hg ppm 0.01	IMS-128 K % 0.01	IMS-128 La ppm 0.5	IMS-128 Mg % 0.01	IMS-128 Mn ppm 5	IMS-128 Mo ppm 0.05	IMS-128 Na % 0.01	IMS-128 Ni ppm 0.1	IMS-128 P ppm 10	IMS-128 Pb ppm 0.2	IMS-128 Re ppm 0.005
Granite Blank	7.3	1.89	4.1	<0.01	0.10	5.8	0.52	496	2.25	0.13	2.8	419	1.0	<0.005
Granite Blank	4.4	1.80	4.2	<0.01	0.11	6.1	0.48	476	2.61	0.13	3.0	415	1.1	<0.005
014251	27.8	2.15	5.3	<0.01	0.51	4.5	0.56	384	1.71	0.19	4.4	674	1.6	<0.005
014252	113.8	2.23	4.0	<0.01	0.37	10.4	0.41	420	4.53	0.09	4.2	721	1.9	<0.005
014253	44.6	2.42	5.6	<0.01	0.40	6.3	0.62	474	2.19	0.15	4.5	750	2.1	<0.005
014254	80.2	2.48	4.2	<0.01	0.33	3.6	0.37	282	31.60	0.08	3.4	796	2.3	0.023
014255	82.3	3.16	7.1	<0.01	0.59	3.3	0.95	848	1.84	0.13	7.4	979	3.5	<0.005
014256	156.2	3.23	7.3	<0.01	0.70	2.6	1.02	635	1.81	0.16	7.7	1035	2.1	<0.005
014257	72.6	2.37	2.4	<0.01	0.23	3.0	0.21	324	271.81	0.06	5.1	407	3.5	0.170
014258	77.2	3.06	6.4	<0.01	0.64	4.6	0.82	574	15.86	0.12	7.2	888	1.8	0.014
014259	70.3	2.73	5.6	<0.01	0.68	3.0	0.76	455	3.20	0.14	6.9	838	1.4	<0.005
014259PD	83.2	2.89	5.6	0.01	0.67	2.2	0.77	442	3.08	0.12	7.1	918	2.8	<0.005
014260	68.6	2.82	5.9	0.01	0.65	3.6	0.74	460	8.96	0.12	6.7	869	1.9	0.007
014261	5.3	0.10	<0.1	<0.01	0.02	1.5	1.53	116	0.10	<0.01	0.3	71	0.6	<0.005
014262	65.7	2.81	6.2	<0.01	0.69	2.8	0.78	595	4.70	0.16	6.4	865	2.3	<0.005
014263	80.3	2.85	6.0	<0.01	0.60	3.2	0.74	636	3.70	0.12	6.8	829	3.2	<0.005
014264	60.7	2.65	6.1	<0.01	0.66	3.0	0.75	532	2.19	0.14	6.8	860	2.3	<0.005
014265	70.7	2.88	6.7	<0.01	0.81	2.4	0.87	564	4.01	0.17	7.1	970	1.6	<0.005
014266	39.2	2.68	6.4	<0.01	0.71	2.5	0.77	508	1.91	0.16	6.2	850	1.8	<0.005
014267	72.2	2.65	5.3	<0.01	0.63	3.6	0.65	438	2.00	0.11	6.0	803	1.8	<0.005
014268	34.0	2.63	6.0	<0.01	0.71	2.1	0.76	439	1.77	0.19	6.0	848	1.1	<0.005
014269	60.2	2.90	6.8	<0.01	0.71	2.5	0.88	493	4.23	0.17	6.8	947	1.6	<0.005
014270	85.9	2.90	6.9	<0.01	0.70	6.5	0.81	613	1.49	0.13	6.1	927	2.3	<0.005
014271	2326.2	4.13	6.1	0.03	0.36	4.2	0.75	663	262.97	0.13	11.8	679	33.7	0.230
014272	75.4	2.58	5.6	<0.01	0.60	5.8	0.68	535	1.52	0.13	5.3	804	2.3	<0.005

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TEST REPORT: YVR1910457

Project Name: Spius_2019_Submission: #3
Job Received Date: 02-Jul-2019
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Report Version: Final

Sample ID	IMS-128 Cu ppm 0.2	IMS-128 Fe % 0.01	IMS-128 Ga ppm 0.1	IMS-128 Hg ppm 0.01	IMS-128 K % 0.01	IMS-128 La ppm 0.5	IMS-128 Mg % 0.01	IMS-128 Mn ppm 5	IMS-128 Mo ppm 0.05	IMS-128 Na % 0.01	IMS-128 Ni ppm 0.1	IMS-128 P ppm 10	IMS-128 Pb ppm 0.2	IMS-128 Re ppm 0.005
014273	107.1	2.40	3.7	<0.01	0.38	8.1	0.36	506	4.93	0.07	4.4	621	4.6	<0.005
014274	48.8	2.93	6.5	<0.01	0.60	8.8	0.70	579	4.11	0.08	5.1	864	2.5	<0.005
014275	94.0	2.10	5.0	<0.01	0.56	4.0	0.55	433	1.73	0.15	4.9	607	3.4	<0.005
014276	51.8	1.49	2.5	<0.01	0.24	2.6	0.16	300	17.27	0.09	3.6	324	2.7	0.007
014277	32.6	3.10	5.4	<0.01	0.58	2.9	0.60	397	11.05	0.11	5.6	754	1.2	0.005
014278	105.3	3.32	7.2	<0.01	0.96	2.5	0.96	615	1.44	0.14	5.9	1587	1.6	<0.005
014279	110.8	2.69	6.0	<0.01	0.55	2.9	0.74	543	2.16	0.13	5.9	839	3.4	<0.005
014280	28.6	2.70	7.5	0.03	0.36	5.1	0.84	1071	1.50	0.16	5.7	846	5.4	<0.005
014281	0.4	0.08	<0.1	<0.01	0.01	1.4	1.32	113	0.08	<0.01	0.2	71	0.4	<0.005
014438	218.4	2.01	5.8	<0.01	0.43	5.6	0.55	325	1.68	0.16	5.4	610	1.4	<0.005
014438PD	199.9	2.14	6.1	<0.01	0.45	5.3	0.60	364	1.67	0.16	5.4	656	1.3	<0.005
014439	372.6	1.63	5.7	<0.01	0.28	7.8	0.44	293	2.39	0.13	3.8	514	2.3	<0.005
014440	516.5	1.79	6.1	<0.01	0.18	6.7	0.55	344	3.50	0.13	4.4	536	2.6	<0.005
014441	2148.7	3.98	6.4	0.02	0.36	4.9	0.74	699	266.57	0.13	11.7	641	34.1	0.230
014442	342.1	2.61	6.8	<0.01	0.34	6.0	0.67	362	10.55	0.13	10.6	713	2.6	<0.005
014443	698.9	2.13	6.7	<0.01	0.27	8.8	0.62	348	5.96	0.14	5.4	664	2.9	<0.005
014444	913.7	2.00	4.6	<0.01	0.21	7.1	0.37	315	3.12	0.11	5.9	632	2.7	<0.005
014445	484.5	1.70	4.5	<0.01	0.24	6.0	0.48	287	3.03	0.13	7.2	539	1.8	<0.005
014446	369.0	2.19	7.5	<0.01	0.41	6.7	0.85	297	5.60	0.16	11.5	548	1.2	0.005
014447	444.9	2.19	7.4	<0.01	0.31	5.8	0.91	290	1.81	0.17	11.5	544	1.4	<0.005
014448	327.0	2.32	7.7	<0.01	0.36	6.4	0.93	246	1.87	0.19	11.7	566	1.6	<0.005
014449	229.9	2.30	7.1	<0.01	0.36	5.6	0.93	242	1.20	0.18	11.6	581	1.3	<0.005
014450	266.6	2.27	7.2	<0.01	0.38	6.1	0.95	261	1.35	0.18	12.0	578	1.4	<0.005
014451	0.8	0.08	<0.1	<0.01	0.01	1.4	1.66	119	0.07	<0.01	0.4	64	0.4	<0.005
014452	337.9	2.16	6.9	<0.01	0.40	6.4	0.86	254	2.31	0.20	11.1	544	1.1	<0.005

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Project Name: Spius_2019_Submission: #3
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Sample ID	IMS-128 Cu ppm 0.2	IMS-128 Fe % 0.01	IMS-128 Ga ppm 0.1	IMS-128 Hg ppm 0.01	IMS-128 K % 0.01	IMS-128 La ppm 0.5	IMS-128 Mg % 0.01	IMS-128 Mn ppm 5	IMS-128 Mo ppm 0.05	IMS-128 Na % 0.01	IMS-128 Ni ppm 0.1	IMS-128 P ppm 10	IMS-128 Pb ppm 0.2	IMS-128 Re ppm 0.005
014453	357.1	2.12	5.9	<0.01	0.37	6.7	0.71	256	3.90	0.15	11.4	565	1.3	<0.005
014454	592.3	2.49	6.9	<0.01	0.36	7.0	0.79	333	79.95	0.16	10.1	543	1.4	0.094
014455	104.0	2.23	6.8	<0.01	0.38	6.6	0.89	255	4.14	0.18	11.3	571	1.1	<0.005
014456	274.9	2.00	4.1	<0.01	0.33	5.8	0.79	301	11.70	0.12	9.5	524	4.5	0.010
014457	201.6	2.26	7.7	<0.01	0.39	6.2	0.89	297	1.76	0.17	11.2	546	1.3	<0.005
014458	116.9	2.15	7.2	<0.01	0.36	6.3	0.79	286	1.78	0.17	10.8	534	1.3	<0.005
014459	602.5	2.18	7.3	<0.01	0.38	5.9	0.84	293	1.48	0.16	11.8	550	1.2	<0.005
014460	375.4	2.13	7.0	<0.01	0.43	6.1	0.88	285	2.11	0.16	11.0	544	1.0	<0.005
014461	3474.1	3.60	6.5	0.04	1.11	7.5	2.31	270	254.14	0.09	205.4	885	20.1	0.282
014462	789.4	2.15	6.9	<0.01	0.31	6.1	0.87	319	1.49	0.17	11.2	505	1.2	<0.005
014463	545.0	2.45	7.9	<0.01	0.35	6.3	0.89	295	1.36	0.15	11.1	575	1.5	<0.005
014464	182.4	2.15	7.3	<0.01	0.43	6.1	0.82	293	1.15	0.17	11.8	514	1.7	<0.005
014465	480.1	2.13	7.5	<0.01	0.50	6.8	0.80	265	0.93	0.16	11.3	527	1.5	<0.005
014466	766.4	2.22	7.6	<0.01	0.42	6.2	0.85	305	1.08	0.14	11.3	540	1.8	<0.005
014467	646.4	2.18	8.3	<0.01	0.33	6.5	0.88	293	8.81	0.19	12.5	517	1.6	0.015
014468	682.3	2.06	7.4	<0.01	0.41	6.4	0.82	273	1.39	0.18	12.1	500	1.4	<0.005
014469	587.9	2.13	7.4	<0.01	0.42	6.5	0.91	269	7.19	0.20	12.1	575	1.4	0.005
014470	116.7	1.99	6.6	<0.01	0.38	5.8	0.81	246	0.80	0.24	11.5	482	1.3	<0.005
014471	5.2	0.09	<0.1	<0.01	<0.01	1.6	0.93	147	0.08	<0.01	0.3	75	0.5	<0.005
014472	538.9	1.95	6.1	<0.01	0.38	7.0	0.50	352	22.51	0.18	5.3	549	2.9	0.013
014473	276.0	2.32	8.4	<0.01	0.38	6.1	0.91	329	1.90	0.18	10.9	550	2.0	<0.005
014474	668.1	2.45	8.2	<0.01	0.40	6.1	0.92	287	3.68	0.21	12.8	564	1.3	<0.005
014475	373.6	2.39	7.6	<0.01	0.45	5.8	0.91	259	0.73	0.24	12.9	567	1.2	<0.005
014476	234.1	2.41	7.9	<0.01	0.46	5.6	0.94	291	3.22	0.22	12.3	564	1.6	<0.005
014477	1025.2	2.30	7.6	<0.01	0.43	6.3	0.93	290	1.36	0.21	12.3	553	1.6	<0.005

***Please refer to the cover page for comments regarding this test report. ***

MSALABS
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Phone: +1-604-888-0875

To: **Pacific Ridge Exploration Ltd**
Suite 1100, 1111 Melville Steet
Vancouver, BC V6E 3V6
Canada

TEST REPORT: YVR1910457

Project Name: Spius_2019_Submission: #3
Job Received Date: 02-Jul-2019
Job Report Date: 22-Jul-2019
Report Version: Final

Sample ID	IMS-128 Cu ppm 0.2	IMS-128 Fe % 0.01	IMS-128 Ga ppm 0.1	IMS-128 Hg ppm 0.01	IMS-128 K % 0.01	IMS-128 La ppm 0.5	IMS-128 Mg % 0.01	IMS-128 Mn ppm 5	IMS-128 Mo ppm 0.05	IMS-128 Na % 0.01	IMS-128 Ni ppm 0.1	IMS-128 P ppm 10	IMS-128 Pb ppm 0.2	IMS-128 Re ppm 0.005
014478	123.0	2.37	8.1	<0.01	0.44	7.1	0.88	266	0.63	0.20	12.5	579	1.4	<0.005
014479	15.7	1.41	7.2	<0.01	0.42	13.3	0.48	267	0.50	0.19	12.5	433	7.1	<0.005
014480	20.8	1.33	7.2	<0.01	0.34	13.8	0.39	219	0.83	0.22	12.6	437	9.1	<0.005
014481	2108.4	4.02	6.5	0.03	0.36	5.0	0.75	704	271.87	0.13	11.8	635	35.6	0.237
014482	23.7	1.26	6.9	<0.01	0.37	15.0	0.57	226	0.93	0.15	11.9	445	10.2	<0.005
014483	26.8	1.35	7.7	<0.01	0.37	15.4	0.58	289	1.23	0.16	12.0	463	8.0	<0.005
014484	736.0	2.06	6.3	<0.01	0.36	6.6	0.66	329	1.89	0.17	11.5	569	2.9	<0.005
014485	640.7	2.25	7.3	<0.01	0.32	5.9	0.90	376	2.72	0.15	12.3	558	1.7	<0.005
014486	428.8	2.22	7.9	<0.01	0.40	5.8	0.91	281	4.37	0.17	12.2	556	1.7	<0.005
014487	717.4	2.05	7.7	<0.01	0.28	5.5	0.90	348	2.81	0.16	11.9	510	1.7	<0.005
014526	1053.2	1.69	5.4	<0.01	0.26	6.1	0.51	270	3.88	0.15	4.4	446	2.7	<0.005
014527	574.4	2.38	7.1	<0.01	0.45	7.5	0.73	409	1.97	0.19	5.8	740	1.7	<0.005
014528	2065.7	2.19	6.9	<0.01	0.40	5.9	0.63	312	2.72	0.17	5.1	610	1.9	<0.005
014529	1056.2	1.95	5.9	<0.01	0.33	5.3	0.59	338	2.59	0.16	5.1	562	1.6	<0.005
014529PD	981.2	1.94	5.9	<0.01	0.33	5.4	0.59	338	2.57	0.17	5.1	533	1.6	<0.005
014530	751.7	1.96	6.4	<0.01	0.39	6.5	0.61	321	3.60	0.18	4.6	563	1.7	<0.005
014531	1480.9	1.67	5.3	<0.01	0.26	5.3	0.49	253	8.12	0.16	5.0	466	1.7	0.007
014532	433.5	1.23	4.4	<0.01	0.24	4.0	0.34	221	2.73	0.16	4.2	391	2.4	<0.005
014533	342.7	2.05	6.2	<0.01	0.35	5.1	0.57	319	1.83	0.20	5.4	603	1.4	<0.005
014534	475.6	1.66	5.7	<0.01	0.25	7.2	0.59	306	2.11	0.15	8.1	858	2.2	<0.005
014535	524.0	1.73	5.4	<0.01	0.26	6.1	0.56	255	2.10	0.18	9.6	459	2.2	<0.005
014536	711.6	1.71	5.8	<0.01	0.27	5.2	0.50	258	2.29	0.17	4.7	546	2.1	<0.005
014537	660.8	1.69	5.2	<0.01	0.30	5.1	0.48	272	4.46	0.18	4.5	553	1.7	0.005
014538	362.8	1.71	5.1	<0.01	0.27	5.7	0.44	286	5.68	0.17	4.3	480	2.7	0.008
014539	406.9	1.83	5.6	<0.01	0.33	5.5	0.55	338	8.50	0.16	4.1	535	2.4	0.009

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To: **Pacific Ridge Exploration Ltd**
Suite 1100, 1111 Melville Steet
Vancouver, BC V6E 3V6
Canada

TEST REPORT: YVR1910457

Project Name: Spius_2019_Submission: #3
Job Received Date: 02-Jul-2019
Job Report Date: 22-Jul-2019
Report Version: Final

Sample ID	IMS-128 Cu ppm 0.2	IMS-128 Fe % 0.01	IMS-128 Ga ppm 0.1	IMS-128 Hg ppm 0.01	IMS-128 K % 0.01	IMS-128 La ppm 0.5	IMS-128 Mg % 0.01	IMS-128 Mn ppm 5	IMS-128 Mo ppm 0.05	IMS-128 Na % 0.01	IMS-128 Ni ppm 0.1	IMS-128 P ppm 10	IMS-128 Pb ppm 0.2	IMS-128 Re ppm 0.005
014540	2090.6	3.96	6.1	0.02	0.34	4.3	0.74	687	265.78	0.12	11.8	635	35.4	0.229
014541	732.7	1.27	3.4	<0.01	0.18	6.2	0.20	356	2.57	0.09	3.3	623	13.5	<0.005
014542	535.3	1.75	5.8	<0.01	0.29	5.7	0.52	308	3.03	0.16	4.3	500	2.5	<0.005
014543	424.4	2.00	6.1	0.01	0.31	6.5	0.56	345	4.07	0.18	4.1	786	4.3	<0.005
014544	536.7	1.83	5.8	0.01	0.32	5.2	0.51	313	2.62	0.17	4.3	542	2.4	<0.005
014545	561.8	2.65	7.5	<0.01	0.39	4.8	0.72	413	2.10	0.23	4.3	883	2.6	<0.005
014546	299.3	2.22	6.8	<0.01	0.32	4.3	0.57	340	3.92	0.26	3.9	658	2.1	0.007
014547	550.4	3.73	10.2	<0.01	0.52	3.6	1.09	449	1.80	0.37	7.9	1199	2.6	0.016
014548	509.1	3.73	11.0	<0.01	0.55	3.3	1.10	495	1.93	0.37	6.6	859	2.6	0.018
014549	1005.8	4.23	11.1	<0.01	0.62	4.7	1.41	896	7.40	0.31	18.8	1093	14.2	0.069
014550	817.9	2.03	5.8	<0.01	0.18	6.7	0.46	316	14.29	0.17	3.2	639	3.1	0.019
014551	1188.8	2.05	5.3	<0.01	0.19	7.8	0.44	250	17.40	0.16	3.4	679	2.4	0.028
014552	816.4	1.98	5.2	<0.01	0.16	9.5	0.44	219	11.41	0.16	3.3	584	2.2	0.015
014553	649.9	2.14	4.6	<0.01	0.24	9.4	0.44	340	54.15	0.13	3.2	642	2.3	0.061
014554	483.2	1.63	4.2	<0.01	0.16	5.4	0.33	525	7.51	0.16	3.2	550	3.4	0.018
014555	0.6	0.08	<0.1	<0.01	<0.01	1.4	1.36	131	0.11	<0.01	0.3	75	0.4	<0.005
014556	127.6	3.33	9.2	<0.01	0.12	13.7	2.06	491	1.87	0.27	77.5	796	9.8	<0.005
014557	2206.5	4.12	6.5	0.02	0.36	5.6	0.75	740	271.47	0.15	11.1	666	35.2	0.226
014558	472.2	2.27	7.8	<0.01	0.29	5.5	0.91	334	2.86	0.19	11.9	563	1.6	<0.005
014559	1275.4	1.95	7.3	<0.01	0.17	5.7	0.85	397	3.01	0.17	11.7	504	1.8	<0.005
014559PD	1265.3	1.92	7.0	<0.01	0.17	5.5	0.85	393	3.20	0.16	11.1	499	1.7	<0.005
014560	1946.0	1.78	6.9	<0.01	0.17	6.1	0.86	434	2.59	0.14	10.5	448	1.7	<0.005
014561	1642.8	1.91	7.1	<0.01	0.16	6.4	0.86	448	5.00	0.14	10.6	450	1.7	<0.005
014562	1282.0	2.17	8.0	<0.01	0.14	5.8	0.95	508	3.22	0.16	10.8	497	2.1	<0.005
014563	1103.4	2.08	7.6	<0.01	0.16	7.3	0.89	500	3.92	0.15	9.2	546	1.5	<0.005

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To: **Pacific Ridge Exploration Ltd**
Suite 1100, 1111 Melville Steet
Vancouver, BC V6E 3V6
Canada

TEST REPORT: YVR1910457

Project Name: Spius_2019_Submission: #3
Job Received Date: 02-Jul-2019
Job Report Date: 22-Jul-2019
Report Version: Final

Sample ID	IMS-128 Cu ppm 0.2	IMS-128 Fe % 0.01	IMS-128 Ga ppm 0.1	IMS-128 Hg ppm 0.01	IMS-128 K % 0.01	IMS-128 La ppm 0.5	IMS-128 Mg % 0.01	IMS-128 Mn ppm 5	IMS-128 Mo ppm 0.05	IMS-128 Na % 0.01	IMS-128 Ni ppm 0.1	IMS-128 P ppm 10	IMS-128 Pb ppm 0.2	IMS-128 Re ppm 0.005
014564	1294.3	1.96	6.9	<0.01	0.16	6.6	0.87	480	3.58	0.15	10.4	497	1.7	<0.005
014565	1249.6	1.85	6.6	<0.01	0.16	5.9	0.76	456	7.74	0.15	10.7	444	2.0	0.006
014566	701.0	2.73	7.9	<0.01	0.26	5.7	1.03	529	13.44	0.16	13.1	699	1.9	0.013
014567	860.5	1.96	5.3	<0.01	0.24	5.9	0.51	317	3.36	0.16	5.0	524	2.5	<0.005
014568	606.8	1.78	5.5	<0.01	0.22	5.2	0.54	311	2.75	0.16	4.8	550	2.3	<0.005
014569	631.3	1.52	5.1	<0.01	0.21	6.3	0.50	270	2.88	0.16	4.7	441	3.1	<0.005
014570	3643.5	3.76	6.6	0.04	1.03	8.3	2.38	294	254.48	0.10	197.6	910	20.3	0.275
014571	964.5	1.39	4.3	<0.01	0.20	8.3	0.35	248	3.38	0.15	4.2	386	3.8	<0.005
014572	612.6	1.66	4.9	<0.01	0.26	8.0	0.43	286	3.37	0.16	4.2	508	2.6	<0.005
014573	1276.8	1.83	5.5	<0.01	0.31	6.0	0.55	376	4.31	0.16	4.4	519	2.4	<0.005
014574	31.4	2.14	4.8	<0.01	0.44	8.3	0.51	435	3.39	0.16	4.1	616	1.5	<0.005
014575	62.6	1.70	3.9	<0.01	0.23	7.1	0.41	539	3.96	0.14	3.4	502	2.8	<0.005
014576	30.3	2.39	6.1	<0.01	0.50	6.0	0.65	507	1.82	0.18	4.4	767	1.7	<0.005
014577	20.5	0.49	1.5	<0.01	0.14	3.7	0.08	434	2.12	0.10	2.5	147	3.3	<0.005
014578	44.9	2.25	5.8	<0.01	0.42	4.3	0.60	474	1.66	0.18	4.3	656	1.9	<0.005
014579	77.9	2.52	5.5	<0.01	0.36	5.5	0.61	457	3.05	0.12	4.1	709	2.4	0.006
014580	71.5	2.60	4.2	<0.01	0.28	9.3	0.53	461	5.08	0.08	3.8	674	4.2	<0.005
014581	104.1	2.32	4.9	<0.01	0.27	8.8	0.49	515	24.64	0.12	3.7	648	4.4	0.042
014582	123.5	2.34	6.3	<0.01	0.34	4.7	0.69	466	1.86	0.15	4.3	732	2.6	<0.005
014582PD	117.1	2.25	6.1	<0.01	0.32	4.0	0.67	451	1.53	0.13	4.1	691	2.4	<0.005
014583	61.5	2.17	5.7	<0.01	0.17	4.5	0.55	393	1.81	0.15	4.1	641	4.3	<0.005
014584	53.2	2.35	5.4	<0.01	0.19	4.4	0.56	398	10.87	0.13	4.0	668	3.4	0.018
014585	0.4	0.06	<0.1	<0.01	0.02	1.5	0.74	119	<0.05	<0.01	0.3	71	0.4	<0.005
014586	34.1	1.80	5.1	<0.01	0.21	4.0	0.47	362	1.76	0.15	3.6	471	3.2	<0.005
014587	34.0	1.47	4.1	<0.01	0.26	4.0	0.36	347	1.64	0.15	3.3	401	2.3	<0.005

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014588	36.4	1.87	4.7	<0.01	0.36	5.0	0.46	371	1.47	0.16	3.6	547	1.6	<0.005
014589	28.6	2.24	5.2	<0.01	0.39	3.5	0.61	414	3.74	0.14	4.1	679	1.6	<0.005
014590	47.5	2.25	5.6	<0.01	0.29	4.4	0.58	467	7.29	0.14	4.3	674	2.7	0.009
014591	32.6	2.25	5.3	<0.01	0.46	3.6	0.59	389	1.56	0.16	4.1	649	1.4	<0.005
014592	31.5	2.25	5.6	<0.01	0.49	9.1	0.55	432	1.79	0.17	4.0	666	1.4	<0.005
014593	30.9	2.14	5.4	<0.01	0.49	5.8	0.57	394	1.75	0.16	4.1	640	1.3	<0.005
014594	25.2	2.05	5.0	<0.01	0.40	4.2	0.53	345	1.45	0.15	3.7	593	1.3	<0.005
014595	21.4	2.01	5.0	<0.01	0.48	6.8	0.50	440	1.55	0.16	3.8	595	2.2	<0.005
014596	34.6	2.19	5.5	<0.01	0.43	5.0	0.58	448	1.40	0.16	3.9	650	2.4	<0.005
014597	44.0	2.06	5.4	<0.01	0.46	3.8	0.54	498	1.39	0.16	3.8	629	1.8	<0.005
014598	35.6	2.38	6.7	<0.01	0.57	7.9	0.56	521	1.88	0.17	5.1	730	2.1	<0.005
014599	32.7	2.19	6.0	<0.01	0.61	3.3	0.58	454	0.35	0.24	4.8	641	1.5	<0.005
014600	2247.0	4.05	6.0	0.03	0.36	4.7	0.73	714	258.55	0.13	11.3	658	35.7	0.228
014601	24.5	2.43	6.5	<0.01	0.60	8.5	0.64	578	0.50	0.21	4.9	719	2.1	<0.005
014602	40.4	2.69	6.7	<0.01	0.69	3.4	0.71	522	0.95	0.24	5.0	834	1.3	<0.005
014603	26.7	2.51	6.3	<0.01	0.60	3.3	0.69	477	1.69	0.26	5.0	763	1.3	<0.005
014604	38.8	2.40	6.5	<0.01	0.54	4.1	0.62	503	2.26	0.24	4.9	710	2.0	<0.005
014605	84.0	2.53	6.5	<0.01	0.43	5.0	0.66	529	1.83	0.19	4.9	742	3.5	<0.005
014605PD	76.5	2.46	6.5	<0.01	0.43	4.5	0.65	516	1.82	0.20	4.8	732	3.6	<0.005
014606	23.4	2.38	6.5	0.02	0.58	3.7	0.63	532	0.85	0.21	4.6	715	2.1	<0.005
014607	90.3	0.73	3.0	0.06	0.21	5.6	0.07	431	1.34	0.18	2.9	169	54.1	<0.005
014608	28.9	2.35	6.3	<0.01	0.62	3.2	0.62	531	0.47	0.24	4.5	702	1.8	<0.005
014609	39.7	2.88	4.5	<0.01	0.50	8.4	0.21	442	7.22	0.06	4.2	680	6.3	0.008
014610	40.6	2.36	6.7	<0.01	0.59	3.7	0.63	500	0.81	0.23	5.0	675	2.0	<0.005
014611	63.1	2.54	6.9	<0.01	0.63	3.1	0.68	498	1.66	0.24	5.3	759	1.9	<0.005

***Please refer to the cover page for comments regarding this test report. ***

MSALABS
Unit 1, 20120 102nd Avenue
Langley, BC V1M 4B4
Phone: +1-604-888-0875

To: **Pacific Ridge Exploration Ltd**
Suite 1100, 1111 Melville Steet
Vancouver, BC V6E 3V6
Canada

TEST REPORT: YVR1910457

Project Name: Spius_2019_Submission: #3
Job Received Date: 02-Jul-2019
Job Report Date: 22-Jul-2019
Report Version: Final

Sample ID	IMS-128 Cu ppm 0.2	IMS-128 Fe % 0.01	IMS-128 Ga ppm 0.1	IMS-128 Hg ppm 0.01	IMS-128 K % 0.01	IMS-128 La ppm 0.5	IMS-128 Mg % 0.01	IMS-128 Mn ppm 5	IMS-128 Mo ppm 0.05	IMS-128 Na % 0.01	IMS-128 Ni ppm 0.1	IMS-128 P ppm 10	IMS-128 Pb ppm 0.2	IMS-128 Re ppm 0.005
014612	37.3	2.34	6.4	<0.01	0.63	6.2	0.64	477	1.03	0.18	4.8	738	2.1	<0.005
014613	43.0	2.54	6.5	<0.01	0.53	4.6	0.69	573	0.68	0.22	5.1	775	3.0	<0.005
014614	28.2	2.61	6.7	<0.01	0.58	4.2	0.74	561	4.69	0.23	5.4	807	1.9	<0.005
014615	0.8	0.07	<0.1	<0.01	0.02	1.4	1.00	119	0.06	<0.01	0.3	79	0.3	<0.005
014616	160.4	2.54	7.6	<0.01	0.51	6.8	1.04	353	3.87	0.30	12.2	640	1.3	<0.005
014617	250.2	2.47	7.3	<0.01	0.55	6.8	1.04	323	16.89	0.26	11.7	639	1.3	0.018
014618	240.7	2.42	7.6	<0.01	0.52	7.0	1.04	332	1.97	0.25	11.9	646	1.6	<0.005
014619	344.1	2.38	7.5	<0.01	0.51	6.9	1.07	363	12.18	0.27	11.8	617	1.6	0.010
014620	214.7	2.39	6.9	<0.01	0.51	7.1	0.97	310	10.25	0.24	11.4	628	1.3	0.010
014621	113.4	2.32	6.7	<0.01	0.50	6.2	0.85	313	2.31	0.19	10.2	631	2.4	<0.005
014622	241.9	1.99	7.2	<0.01	0.48	5.9	0.82	261	1.14	0.24	9.9	533	1.3	<0.005
014623	248.3	2.41	7.6	<0.01	0.47	6.8	1.04	361	0.59	0.28	11.4	612	1.4	<0.005
014624	245.6	2.38	9.2	<0.01	0.39	7.0	0.99	284	1.46	0.23	11.5	613	1.6	<0.005
014625	3633.7	3.89	6.5	0.05	1.28	7.9	2.62	292	249.95	0.10	210.0	1019	19.2	0.290
014626	625.6	1.74	5.8	<0.01	0.41	7.1	0.46	325	1.94	0.23	5.0	499	3.2	<0.005
014626PD	599.8	1.74	5.8	<0.01	0.41	7.2	0.47	325	1.98	0.23	4.8	490	3.2	<0.005
014627	415.1	1.67	4.9	<0.01	0.34	4.6	0.46	295	7.89	0.23	4.4	452	2.4	0.006

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Canada

TEST REPORT: YVR1910457

Project Name: Spius_2019_Submission: #3
Job Received Date: 02-Jul-2019
Job Report Date: 22-Jul-2019
Report Version: Final

	IMS-128	IMS-128	IMS-128	IMS-128	IMS-128	IMS-128	IMS-128	IMS-128	IMS-128	IMS-128	IMS-128	IMS-128	IMS-128	IMS-128
	Cu	Fe	Ga	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Re
	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample ID	0.2	0.01	0.1	0.01	0.01	0.5	0.01	5	0.05	0.01	0.1	10	0.2	0.005
DUP 014267	73.7	2.66	5.5	<0.01	0.63	3.6	0.65	438	2.07	0.11	6.1	809	1.8	<0.005
DUP 014458	116.3	2.16	7.0	<0.01	0.35	6.0	0.80	288	1.62	0.16	10.4	537	1.2	<0.005
DUP 014483	27.9	1.35	7.7	<0.01	0.37	15.9	0.58	290	1.25	0.16	12.5	467	7.9	<0.005
DUP 014554	483.5	1.63	4.1	<0.01	0.16	5.6	0.33	527	7.72	0.16	3.1	542	3.5	0.017
DUP 014586	34.1	1.79	5.0	<0.01	0.21	4.0	0.46	359	1.83	0.15	3.6	470	3.2	<0.005
STD BLANK	<0.2	<0.01	<0.1	<0.01	<0.01	<0.5	<0.01	<5	<0.05	<0.01	<0.1	<10	<0.2	<0.005
STD BLANK	<0.2	<0.01	<0.1	<0.01	<0.01	<0.5	<0.01	<5	<0.05	<0.01	<0.1	<10	<0.2	<0.005
STD BLANK	<0.2	<0.01	<0.1	<0.01	<0.01	<0.5	<0.01	<5	<0.05	<0.01	<0.1	<10	<0.2	<0.005
STD BLANK	<0.2	<0.01	<0.1	<0.01	<0.01	<0.5	<0.01	<5	<0.05	<0.01	<0.1	<10	<0.2	<0.005
STD BLANK	<0.2	<0.01	<0.1	<0.01	<0.01	<0.5	<0.01	<5	<0.05	<0.01	<0.1	<10	<0.2	<0.005
STD OREAS 25a	24.8	6.39	21.1	0.06	0.13	13.4	0.20	415	1.37	0.05	28.3	388	20.4	<0.005
STD OREAS 600	488.2	2.16	3.8	0.23	0.21	17.9	0.33	670	1.90	0.06	16.0	464	157.2	<0.005
STD OREAS 25a	24.9	5.84	20.8	0.06	0.12	13.9	0.18	419	1.50	0.04	28.3	346	20.9	<0.005
STD OREAS 600	483.9	2.23	3.8	0.23	0.22	18.2	0.36	689	2.00	0.06	15.2	511	149.8	<0.005
STD OREAS 25a	23.6	6.21	20.1	0.05	0.13	13.8	0.19	448	1.54	0.04	26.8	380	21.1	<0.005

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TEST REPORT: YVR1910457

Project Name: Spius_2019_Submission: #3
Job Received Date: 02-Jul-2019
Job Report Date: 22-Jul-2019
Report Version: Final

Sample ID	IMS-128 S % 0.01	IMS-128 Sb ppm 0.05	IMS-128 Sc ppm 0.1	IMS-128 Se ppm 0.2	IMS-128 Sr ppm 0.5	IMS-128 Te ppm 0.05	IMS-128 Th ppm 0.2	IMS-128 Ti % 0.005	IMS-128 Tl ppm 0.05	IMS-128 U ppm 0.05	IMS-128 V ppm 1	IMS-128 W ppm 0.05	IMS-128 Y ppm 0.5	IMS-128 Zn ppm 2
Granite Blank	0.02	<0.05	2.7	<0.2	21.8	<0.05	2.1	0.096	<0.05	0.44	27	0.45	9.4	32
Granite Blank	0.02	<0.05	2.6	<0.2	24.9	<0.05	2.1	0.098	<0.05	0.45	25	0.60	9.6	29
014251	0.40	<0.05	3.2	<0.2	40.6	<0.05	0.9	0.135	0.11	0.51	40	0.58	4.6	55
014252	1.08	0.08	2.5	0.5	39.3	0.47	1.6	0.044	0.11	0.48	27	0.60	6.1	52
014253	1.08	0.06	2.8	0.3	41.5	0.06	1.1	0.093	0.12	0.55	37	0.63	4.7	62
014254	1.56	<0.05	1.7	0.9	21.3	0.06	0.8	0.055	0.07	1.02	22	0.95	6.3	39
014255	1.71	0.07	4.4	0.4	105.4	0.19	0.6	0.167	0.17	0.74	61	2.76	5.0	98
014256	1.31	0.08	5.2	0.3	87.1	0.17	0.4	0.228	0.21	0.37	72	1.68	5.2	83
014257	2.94	0.09	0.8	1.1	166.6	0.13	1.3	0.007	0.06	2.89	10	4.57	4.2	32
014258	1.58	0.06	3.6	0.5	80.7	0.08	0.7	0.163	0.19	0.86	53	1.01	5.0	77
014259	1.17	0.05	3.2	0.3	89.5	<0.05	0.5	0.182	0.16	2.24	52	0.87	4.4	64
014259PD	1.41	0.08	3.2	0.5	93.8	0.07	0.4	0.177	0.17	1.22	51	0.84	4.1	66
014260	1.28	0.06	3.0	0.5	97.3	0.08	0.6	0.161	0.18	0.62	48	0.78	4.0	66
014261	0.02	0.07	0.1	<0.2	66.7	<0.05	<0.2	<0.005	<0.05	0.24	1	<0.05	3.0	<2
014262	1.34	0.09	3.3	0.4	76.3	0.09	0.5	0.172	0.21	0.63	51	0.85	4.2	89
014263	2.59	0.10	3.7	0.4	157.2	0.25	0.5	0.154	0.16	0.48	49	1.96	5.1	147
014264	1.29	0.06	3.6	0.3	89.6	0.13	0.5	0.194	0.15	0.60	54	1.08	4.2	96
014265	1.03	0.05	4.2	0.2	92.5	0.07	0.4	0.219	0.17	0.38	60	0.77	4.7	82
014266	0.87	0.06	3.5	<0.2	64.9	0.10	0.4	0.204	0.14	0.42	57	0.94	4.2	71
014267	1.33	0.10	3.2	0.4	171.6	<0.05	0.6	0.153	0.13	0.55	45	0.73	4.5	60
014268	0.53	<0.05	3.3	<0.2	64.8	<0.05	0.4	0.220	0.14	0.52	57	0.78	3.6	61
014269	0.67	<0.05	4.5	0.2	76.6	0.06	0.3	0.230	0.15	0.24	63	2.17	4.5	71
014270	0.87	0.07	4.1	0.3	164.0	<0.05	0.9	0.181	0.17	0.51	56	0.69	5.0	79
014271	1.64	1.20	3.4	2.5	55.6	0.35	3.2	0.095	0.22	0.67	51	2.91	6.2	220
014272	0.64	0.07	3.7	0.2	121.2	0.07	0.8	0.128	0.14	0.50	46	0.44	5.4	77

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Vancouver, BC V6E 3V6
Canada

TEST REPORT: YVR1910457

Project Name: Spius_2019_Submission: #3
Job Received Date: 02-Jul-2019
Job Report Date: 22-Jul-2019
Report Version: Final

Sample ID	IMS-128 S % 0.01	IMS-128 Sb ppm 0.05	IMS-128 Sc ppm 0.1	IMS-128 Se ppm 0.2	IMS-128 Sr ppm 0.5	IMS-128 Te ppm 0.05	IMS-128 Th ppm 0.2	IMS-128 Ti % 0.005	IMS-128 Tl ppm 0.05	IMS-128 U ppm 0.05	IMS-128 V ppm 1	IMS-128 W ppm 0.05	IMS-128 Y ppm 0.5	IMS-128 Zn ppm 2
014273	1.97	0.08	2.0	0.6	135.1	0.21	1.4	0.035	0.12	0.93	24	0.49	4.6	93
014274	0.93	0.08	3.9	0.4	204.1	0.10	1.2	0.117	0.15	0.33	44	0.46	6.0	81
014275	0.60	0.50	2.4	0.3	149.0	<0.05	0.6	0.137	0.17	1.16	38	0.65	3.7	68
014276	1.28	0.08	0.9	0.6	67.6	<0.05	1.4	0.023	0.08	3.58	10	0.75	4.6	41
014277	1.75	<0.05	2.5	0.9	76.1	<0.05	0.6	0.146	0.16	0.63	42	0.79	3.9	58
014278	0.76	<0.05	3.1	0.3	76.1	<0.05	0.7	0.255	0.26	2.40	64	0.64	4.1	89
014279	1.16	0.08	3.5	0.4	89.7	0.14	0.6	0.174	0.14	0.57	49	2.20	3.9	141
014280	1.68	0.18	3.5	<0.2	62.7	0.88	1.3	0.124	0.15	0.92	47	1.32	5.5	158
014281	<0.01	<0.05	0.1	<0.2	67.6	<0.05	<0.2	<0.005	<0.05	0.11	2	<0.05	2.7	<2
014438	0.03	<0.05	2.9	<0.2	28.6	<0.05	1.1	0.126	0.09	0.72	46	0.51	6.7	52
014438PD	0.03	<0.05	3.4	<0.2	37.9	<0.05	1.0	0.130	0.10	0.67	47	0.47	6.8	55
014439	0.03	<0.05	3.1	<0.2	23.2	<0.05	1.4	0.069	0.07	0.52	33	0.43	6.5	59
014440	0.18	0.06	3.2	0.3	23.1	0.13	1.4	0.046	<0.05	0.94	41	0.66	7.4	59
014441	1.57	1.40	3.9	2.5	66.2	0.38	3.4	0.100	0.23	0.72	48	2.75	6.6	207
014442	0.41	0.11	5.7	0.4	35.9	0.12	1.4	0.107	0.09	1.06	56	0.48	7.0	73
014443	0.37	0.07	3.8	0.4	30.4	0.16	1.8	0.062	0.06	0.66	56	1.43	9.3	66
014444	0.73	0.11	3.2	0.6	32.8	0.19	1.4	0.034	0.05	0.65	34	0.43	7.8	54
014445	0.23	0.06	3.4	0.2	30.1	0.09	1.3	0.053	0.06	0.61	33	0.52	5.9	41
014446	0.11	<0.05	4.7	<0.2	44.0	<0.05	1.7	0.087	0.09	0.42	49	0.36	5.3	44
014447	0.13	0.09	5.3	0.2	51.8	<0.05	1.7	0.149	0.07	0.32	55	0.42	5.2	52
014448	0.05	0.10	5.5	<0.2	55.0	<0.05	1.8	0.162	0.08	0.47	57	0.43	5.5	44
014449	0.05	0.11	5.6	<0.2	55.9	<0.05	1.8	0.166	0.07	0.64	56	0.41	5.2	40
014450	0.08	0.07	5.7	<0.2	57.5	<0.05	1.8	0.151	0.08	0.55	55	0.41	5.5	46
014451	<0.01	<0.05	0.1	<0.2	75.8	<0.05	<0.2	<0.005	<0.05	0.08	<1	<0.05	2.6	<2
014452	0.09	0.06	4.8	0.2	55.8	<0.05	1.7	0.091	0.08	0.67	49	0.34	5.2	42

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TEST REPORT: YVR1910457

Project Name: Spius_2019_Submission: #3
Job Received Date: 02-Jul-2019
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Sample ID	IMS-128 S % 0.01	IMS-128 Sb ppm 0.05	IMS-128 Sc ppm 0.1	IMS-128 Se ppm 0.2	IMS-128 Sr ppm 0.5	IMS-128 Te ppm 0.05	IMS-128 Th ppm 0.2	IMS-128 Ti % 0.005	IMS-128 Tl ppm 0.05	IMS-128 U ppm 0.05	IMS-128 V ppm 1	IMS-128 W ppm 0.05	IMS-128 Y ppm 0.5	IMS-128 Zn ppm 2
014453	0.12	0.08	5.1	0.3	54.9	0.06	1.8	0.073	0.08	1.15	48	0.28	5.5	45
014454	0.24	0.07	4.4	0.3	50.3	<0.05	1.9	0.071	0.08	0.74	55	0.39	6.2	55
014455	0.05	0.06	4.9	<0.2	58.5	<0.05	1.8	0.077	0.08	0.44	48	0.32	5.4	41
014456	0.13	0.31	4.7	<0.2	58.0	<0.05	1.6	0.048	0.08	0.34	38	0.36	5.0	56
014457	0.12	0.06	4.6	<0.2	63.0	<0.05	1.7	0.074	0.08	0.32	51	0.36	5.3	48
014458	0.20	0.05	4.4	<0.2	58.9	<0.05	1.6	0.064	0.08	0.34	46	0.37	5.6	41
014459	0.25	0.07	4.2	0.3	63.4	<0.05	1.6	0.065	0.09	0.35	48	0.38	5.1	44
014460	0.11	0.08	4.5	<0.2	62.4	<0.05	1.9	0.078	0.09	0.44	49	0.41	5.3	42
014461	2.37	7.74	7.2	3.0	72.0	1.33	1.4	0.152	0.74	0.47	73	5.75	7.5	153
014462	0.22	0.10	5.3	0.3	69.5	<0.05	2.1	0.112	0.07	0.61	53	0.38	5.5	51
014463	0.56	0.10	4.4	0.6	97.3	0.06	1.5	0.084	0.09	0.39	52	0.36	5.5	44
014464	0.33	0.53	5.1	<0.2	220.1	<0.05	1.6	0.074	0.10	0.29	46	<0.05	5.0	37
014465	0.48	0.10	5.0	<0.2	188.9	<0.05	1.6	0.084	0.11	0.26	46	<0.05	5.1	34
014466	0.44	0.42	4.7	0.3	155.0	0.06	1.7	0.067	0.11	0.24	44	<0.05	5.1	44
014467	0.65	0.10	4.7	0.4	101.6	<0.05	1.5	0.104	0.08	0.22	45	<0.05	5.1	46
014468	0.63	0.07	4.5	0.4	94.1	<0.05	1.6	0.074	0.09	0.23	43	<0.05	5.2	43
014469	0.48	0.10	5.3	0.3	83.3	<0.05	1.6	0.132	0.09	0.28	51	<0.05	5.3	39
014470	0.29	0.08	4.4	<0.2	87.7	<0.05	1.4	0.103	0.08	0.23	45	<0.05	4.6	35
014471	<0.01	<0.05	0.2	<0.2	81.7	<0.05	<0.2	<0.005	<0.05	0.13	<1	<0.05	3.2	<2
014472	0.61	0.12	3.3	0.4	66.6	<0.05	1.1	0.074	0.10	0.71	36	0.06	7.5	48
014473	0.59	0.11	4.9	0.2	96.0	<0.05	1.4	0.134	0.09	0.33	56	0.10	5.9	47
014474	0.61	0.09	5.4	0.4	90.6	0.06	1.6	0.153	0.09	0.30	59	0.06	5.3	44
014475	0.41	0.12	5.8	0.2	91.2	<0.05	1.8	0.173	0.10	0.28	58	<0.05	5.4	37
014476	0.48	0.10	5.8	<0.2	90.3	<0.05	1.7	0.184	0.10	0.31	57	<0.05	5.6	40
014477	0.48	0.10	5.2	0.3	104.8	0.05	1.7	0.119	0.10	0.29	52	0.05	5.4	41

***Please refer to the cover page for comments regarding this test report. ***

MSALABS
Unit 1, 20120 102nd Avenue
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Phone: +1-604-888-0875

To: **Pacific Ridge Exploration Ltd**
Suite 1100, 1111 Melville Steet
Vancouver, BC V6E 3V6
Canada

TEST REPORT: YVR1910457

Project Name: Spius_2019_Submission: #3
Job Received Date: 02-Jul-2019
Job Report Date: 22-Jul-2019
Report Version: Final

Sample ID	IMS-128 S % 0.01	IMS-128 Sb ppm 0.05	IMS-128 Sc ppm 0.1	IMS-128 Se ppm 0.2	IMS-128 Sr ppm 0.5	IMS-128 Te ppm 0.05	IMS-128 Th ppm 0.2	IMS-128 Ti % 0.005	IMS-128 Tl ppm 0.05	IMS-128 U ppm 0.05	IMS-128 V ppm 1	IMS-128 W ppm 0.05	IMS-128 Y ppm 0.5	IMS-128 Zn ppm 2
014478	0.23	0.09	5.0	<0.2	192.5	<0.05	1.7	0.083	0.10	0.26	49	<0.05	5.5	31
014479	0.04	0.07	1.9	<0.2	354.7	<0.05	2.0	0.067	0.11	1.09	23	<0.05	1.9	34
014480	0.06	0.08	1.7	<0.2	261.7	<0.05	2.1	0.051	0.09	1.04	22	<0.05	2.0	35
014481	1.58	1.28	3.9	2.4	66.5	0.39	3.6	0.099	0.24	0.74	48	2.87	6.7	217
014482	0.04	0.05	1.3	<0.2	214.9	<0.05	2.4	0.060	0.08	0.90	21	0.14	1.9	38
014483	0.06	0.07	1.4	<0.2	312.6	<0.05	2.1	0.039	0.09	0.62	20	0.10	2.0	44
014484	0.39	0.08	4.4	0.3	233.0	<0.05	1.6	0.059	0.09	0.44	45	0.46	5.0	92
014485	0.74	0.09	4.6	0.4	94.8	0.10	1.6	0.087	0.08	0.46	49	0.60	5.1	89
014486	0.59	0.08	5.0	0.3	98.8	<0.05	1.5	0.116	0.10	0.40	54	0.61	5.2	42
014487	0.66	0.10	4.7	0.3	76.8	0.12	1.6	0.130	0.07	0.40	52	0.80	5.1	62
014526	0.12	0.07	3.0	0.4	28.8	0.13	1.2	0.088	0.06	0.52	33	0.68	5.9	48
014527	0.08	0.07	5.3	0.2	41.6	<0.05	1.7	0.192	0.12	0.50	52	0.74	8.2	60
014528	0.28	0.09	5.8	0.9	32.8	0.10	1.1	0.158	0.10	0.75	47	0.68	8.2	57
014529	0.13	0.09	4.7	0.4	33.9	<0.05	1.0	0.141	0.08	0.54	40	0.67	7.5	53
014529PD	0.13	0.09	4.6	0.4	36.6	0.07	1.0	0.142	0.08	0.53	40	0.68	7.1	52
014530	0.11	0.10	4.6	0.3	34.5	0.09	1.2	0.159	0.10	0.52	42	0.74	6.2	53
014531	0.21	0.10	3.6	0.7	31.8	0.10	1.0	0.117	0.07	0.51	33	0.88	5.1	46
014532	0.12	0.09	2.5	0.2	29.0	0.06	0.8	0.081	0.06	0.95	22	0.57	4.9	33
014533	0.05	0.07	3.9	<0.2	43.8	<0.05	0.7	0.154	0.08	0.40	41	0.48	5.8	50
014534	0.15	0.13	3.9	0.3	39.8	0.05	1.1	0.124	0.06	0.53	38	0.64	8.0	43
014535	0.19	0.08	2.9	0.4	129.4	<0.05	1.2	0.118	0.06	0.60	37	0.53	4.3	41
014536	0.19	0.11	3.1	0.5	39.8	<0.05	0.9	0.131	0.06	0.64	37	0.66	4.7	41
014537	0.17	0.08	3.3	0.3	32.5	0.08	0.9	0.124	0.07	0.54	34	0.66	4.7	42
014538	0.29	0.11	2.8	0.4	35.0	0.11	1.2	0.102	0.07	0.69	31	0.72	5.3	41
014539	0.21	0.08	2.9	0.3	35.0	<0.05	1.0	0.112	0.09	0.60	34	0.69	4.4	50

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014540	1.58	1.34	3.8	2.4	62.7	0.42	3.5	0.086	0.23	0.73	46	2.93	6.2	219
014541	0.72	0.24	1.3	0.9	39.8	0.77	1.4	0.006	0.05	1.45	12	0.76	6.8	32
014542	0.20	0.09	3.5	0.4	36.1	0.06	1.2	0.106	0.08	0.83	35	0.79	5.8	45
014543	0.30	0.11	3.5	0.6	50.6	<0.05	1.1	0.138	0.09	0.59	44	0.76	7.5	53
014544	0.22	0.08	4.4	0.4	36.9	<0.05	1.3	0.119	0.08	1.77	37	0.67	7.8	46
014545	0.26	0.08	5.3	0.5	65.3	<0.05	0.7	0.167	0.10	1.36	60	0.63	9.3	57
014546	0.31	0.08	4.2	0.4	75.0	<0.05	0.8	0.171	0.09	1.16	56	0.66	6.5	46
014547	0.54	0.07	8.3	0.7	122.0	0.05	0.5	0.264	0.16	1.96	126	1.80	9.0	66
014548	0.56	0.08	8.4	0.5	124.8	0.06	0.6	0.268	0.19	1.97	123	1.43	8.6	70
014549	1.79	0.08	11.6	1.5	100.8	0.08	0.7	0.296	0.24	1.69	127	13.34	11.7	128
014550	0.73	0.11	3.5	0.6	33.8	<0.05	1.0	0.132	0.06	0.49	36	1.04	9.0	46
014551	0.74	0.09	3.9	1.0	35.6	0.09	1.2	0.118	0.05	0.62	37	0.94	9.7	35
014552	0.66	0.13	3.5	1.0	35.7	<0.05	1.7	0.130	<0.05	0.73	36	0.90	8.8	28
014553	1.21	0.07	3.3	0.9	35.2	0.07	1.4	0.076	0.06	0.70	25	0.92	8.5	36
014554	1.09	0.12	3.6	0.4	28.9	0.13	1.6	0.077	0.06	4.29	22	1.16	8.5	41
014555	<0.01	<0.05	0.1	<0.2	71.7	<0.05	<0.2	<0.005	<0.05	0.23	<1	<0.05	2.6	<2
014556	0.10	0.19	5.9	<0.2	152.0	<0.05	1.9	0.269	0.05	1.13	95	0.33	5.6	60
014557	1.64	1.22	3.9	2.2	66.9	0.40	3.8	0.114	0.24	0.82	51	2.85	7.0	220
014558	0.62	0.09	5.2	0.3	82.9	0.10	1.8	0.160	0.07	0.43	59	0.77	5.2	53
014559	0.90	0.12	4.7	0.6	84.2	0.08	1.7	0.140	<0.05	0.41	53	0.90	5.0	69
014559PD	0.86	0.12	4.4	0.5	80.9	0.14	1.6	0.138	<0.05	0.39	51	0.89	4.8	67
014560	0.98	0.11	3.8	0.7	91.2	0.10	1.5	0.085	0.05	0.36	43	0.80	4.9	78
014561	1.13	0.11	3.9	0.7	91.5	0.11	1.6	0.073	<0.05	0.37	45	0.85	4.9	79
014562	1.26	0.13	4.3	0.8	79.6	0.14	1.6	0.105	<0.05	0.38	57	0.99	4.7	87
014563	1.20	0.07	3.5	0.6	99.4	0.21	1.5	0.019	<0.05	0.43	43	0.68	5.5	84

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TEST REPORT: YVR1910457

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014564	1.10	0.09	3.5	0.7	99.8	0.10	1.5	0.048	<0.05	0.42	45	0.73	5.1	78
014565	0.95	0.46	4.1	0.5	113.4	0.15	1.6	0.088	<0.05	0.37	47	0.76	4.7	79
014566	1.32	0.13	5.0	0.6	120.4	0.11	1.3	0.143	0.07	0.50	62	0.94	5.6	80
014567	0.73	0.07	2.9	0.4	61.1	0.11	1.1	0.097	0.07	0.51	37	0.93	7.2	49
014568	0.53	0.08	3.1	0.3	60.0	0.11	1.1	0.128	0.06	0.51	38	0.97	6.9	47
014569	0.56	0.08	2.8	0.3	71.8	0.12	1.4	0.076	0.05	0.82	33	0.88	6.5	40
014570	2.48	6.54	6.8	3.0	70.7	1.30	1.5	0.162	0.76	0.50	79	5.53	7.6	161
014571	0.46	0.08	2.3	0.4	139.1	0.16	1.5	0.035	0.05	0.69	25	0.96	6.5	39
014572	0.42	0.09	2.6	0.3	104.8	<0.05	1.6	0.060	0.07	0.57	31	2.50	7.1	44
014573	0.60	0.05	3.3	0.5	78.1	0.07	1.1	0.111	0.09	0.47	39	0.88	7.1	55
014574	0.56	<0.05	2.9	0.2	40.6	<0.05	2.0	0.102	0.14	2.86	34	0.64	5.6	53
014575	0.66	0.07	2.1	0.3	36.0	0.07	2.0	0.047	0.11	3.41	22	0.65	6.0	55
014576	0.48	<0.05	3.6	<0.2	48.5	0.06	1.0	0.144	0.16	0.40	44	0.55	5.2	72
014577	0.29	<0.05	0.6	<0.2	11.9	<0.05	1.8	<0.005	<0.05	4.00	3	0.74	4.1	18
014578	0.85	<0.05	2.0	0.3	43.4	0.15	0.8	0.147	0.13	0.27	39	0.73	3.1	62
014579	1.57	0.07	2.9	0.6	41.1	0.13	1.0	0.097	0.10	0.47	34	1.01	4.6	55
014580	2.18	0.09	1.7	0.7	42.2	0.12	1.5	0.018	0.08	0.93	19	0.73	6.6	46
014581	1.66	0.09	1.9	0.5	37.3	1.16	1.7	0.040	0.09	3.67	26	1.13	6.3	70
014582	1.18	0.06	3.4	0.4	39.4	0.15	0.9	0.081	0.14	0.64	36	0.87	5.1	69
014582PD	1.09	0.06	3.3	0.4	36.9	0.12	0.7	0.081	0.14	0.61	35	0.82	4.6	66
014583	1.47	0.08	2.8	0.4	41.4	0.15	1.1	0.105	0.05	0.68	30	1.41	5.4	56
014584	1.80	0.10	3.0	0.5	39.3	0.10	1.1	0.102	0.06	0.50	30	1.27	4.8	45
014585	<0.01	<0.05	<0.1	<0.2	75.1	<0.05	<0.2	<0.005	<0.05	0.12	<1	<0.05	2.8	<2
014586	0.94	0.09	3.4	0.3	43.5	0.08	1.1	0.098	0.07	0.45	27	1.38	3.8	56
014587	0.47	<0.05	2.2	<0.2	29.2	<0.05	0.9	0.082	0.07	0.95	24	0.87	3.3	47

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014588	0.50	<0.05	3.0	0.2	31.5	0.08	0.9	0.115	0.08	0.99	30	0.73	4.0	54
014589	0.74	<0.05	3.1	0.3	37.5	0.07	0.6	0.144	0.09	0.41	38	0.85	4.0	57
014590	1.06	0.06	2.9	0.4	45.3	0.06	0.8	0.124	0.08	0.72	33	1.16	4.5	59
014591	0.70	<0.05	2.9	0.3	37.1	<0.05	0.7	0.158	0.10	0.66	39	0.81	3.9	53
014592	0.48	<0.05	3.5	0.2	42.3	<0.05	1.4	0.124	0.11	0.63	38	0.66	5.2	58
014593	0.49	<0.05	2.7	<0.2	36.3	<0.05	0.9	0.124	0.12	0.62	36	0.69	4.1	56
014594	0.45	<0.05	1.3	0.2	34.4	<0.05	0.7	0.119	0.10	0.28	33	0.70	2.3	57
014595	0.38	0.05	2.6	<0.2	40.7	<0.05	1.1	0.106	0.12	0.91	33	0.67	4.6	55
014596	0.78	0.05	2.4	<0.2	44.1	0.10	0.8	0.128	0.11	0.50	38	0.85	4.0	62
014597	0.59	0.05	2.8	0.2	34.3	0.06	0.9	0.146	0.16	1.83	37	0.79	4.0	64
014598	0.54	0.06	3.4	<0.2	57.7	<0.05	1.2	0.111	0.13	0.34	39	0.20	7.0	61
014599	0.21	<0.05	2.9	<0.2	47.3	<0.05	0.7	0.169	0.14	0.67	40	0.10	4.6	58
014600	1.64	1.27	3.5	2.3	61.7	0.47	3.5	0.095	0.23	0.74	49	2.93	6.3	215
014601	0.33	<0.05	3.6	<0.2	53.2	<0.05	1.3	0.138	0.15	0.52	41	0.33	6.1	82
014602	0.47	0.05	3.7	0.2	51.5	0.06	0.6	0.213	0.14	0.26	50	0.14	4.5	67
014603	0.32	0.05	3.4	<0.2	57.4	<0.05	0.6	0.209	0.11	0.32	50	0.25	4.6	63
014604	0.58	0.05	3.5	0.2	56.5	0.05	0.8	0.171	0.13	0.55	43	0.68	4.9	60
014605	1.35	0.11	3.1	0.4	53.9	0.21	0.7	0.112	0.11	0.42	41	1.48	4.6	65
014605PD	1.31	0.10	2.9	0.3	54.0	0.10	0.7	0.110	0.11	0.46	40	1.46	4.7	63
014606	0.50	<0.05	3.0	<0.2	53.7	0.15	0.6	0.148	0.14	0.43	42	0.50	4.8	63
014607	0.40	0.32	0.8	0.3	165.1	0.06	2.7	<0.005	0.05	3.88	2	0.40	4.1	787
014608	0.37	0.05	3.3	<0.2	48.4	<0.05	0.8	0.178	0.18	1.14	45	0.17	4.7	65
014609	2.70	0.07	1.2	1.4	55.9	0.30	1.6	0.010	0.09	1.10	13	0.95	8.0	40
014610	0.51	<0.05	3.0	0.2	53.5	0.05	0.8	0.161	0.18	1.08	42	0.14	5.1	64
014611	0.62	0.05	3.7	0.3	66.9	0.05	0.5	0.194	0.15	0.30	48	0.37	4.0	95

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014612	0.50	<0.05	4.1	0.2	157.9	<0.05	1.1	0.132	0.13	0.69	42	0.17	5.4	60
014613	1.04	0.07	4.4	0.2	83.1	0.10	1.0	0.137	0.12	1.08	45	1.33	5.7	62
014614	0.79	0.07	4.6	<0.2	84.3	0.09	1.0	0.187	0.15	0.97	50	0.85	5.6	66
014615	<0.01	<0.05	0.3	<0.2	83.4	<0.05	<0.2	<0.005	<0.05	0.11	1	<0.05	3.1	<2
014616	0.06	0.09	7.0	<0.2	89.4	<0.05	1.9	0.173	0.09	0.60	68	0.12	5.7	53
014617	0.13	0.07	6.4	<0.2	76.0	<0.05	1.8	0.142	0.10	0.57	65	<0.05	5.4	53
014618	0.12	0.06	5.9	<0.2	70.5	0.06	1.9	0.111	0.10	0.55	64	0.06	5.6	47
014619	0.18	0.08	6.6	0.2	75.2	<0.05	1.9	0.145	0.10	0.57	67	0.08	5.5	58
014620	0.09	0.20	6.2	<0.2	73.4	<0.05	1.8	0.074	0.09	0.42	56	<0.05	5.6	52
014621	0.07	0.74	6.0	<0.2	73.1	<0.05	1.7	0.069	0.10	0.31	55	0.12	5.5	48
014622	0.07	<0.05	4.8	<0.2	72.2	<0.05	1.7	0.077	0.09	0.33	53	0.06	5.3	36
014623	0.16	0.06	6.0	<0.2	91.5	<0.05	1.8	0.127	0.09	0.53	65	0.06	5.1	53
014624	0.12	0.11	6.1	<0.2	90.8	<0.05	1.8	0.131	0.08	0.31	72	0.08	5.5	40
014625	2.47	5.47	8.6	2.9	76.8	1.08	1.6	0.169	0.74	0.50	90	5.64	7.9	162
014626	0.51	0.05	3.6	0.4	86.2	<0.05	1.2	0.065	0.09	0.80	36	0.08	7.1	42
014626PD	0.50	0.07	3.6	0.4	86.9	<0.05	1.3	0.066	0.09	0.88	35	0.07	7.1	42
014627	0.37	0.06	3.2	0.2	58.0	<0.05	0.8	0.102	0.07	1.17	35	0.12	5.8	39

***Please refer to the cover page for comments regarding this test report. ***

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TEST REPORT: YVR1910457

Project Name: Spius_2019_Submission: #3
Job Received Date: 02-Jul-2019
Job Report Date: 22-Jul-2019
Report Version: Final

	IMS-128	IMS-128	IMS-128	IMS-128	IMS-128	IMS-128	IMS-128	IMS-128	IMS-128	IMS-128	IMS-128	IMS-128	IMS-128	IMS-128
	S	Sb	Sc	Se	Sr	Te	Th	Ti	Tl	U	V	W	Y	Zn
	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
Sample ID	0.01	0.05	0.1	0.2	0.5	0.05	0.2	0.005	0.05	0.05	1	0.05	0.5	2
DUP 014267	1.34	0.09	3.2	0.4	180.3	0.06	0.6	0.152	0.13	0.55	46	0.71	4.6	61
DUP 014458	0.21	<0.05	4.2	<0.2	55.8	0.05	1.6	0.065	0.08	0.32	46	0.32	5.4	40
DUP 014483	0.06	0.08	1.4	<0.2	320.9	<0.05	2.1	0.039	0.08	0.62	20	0.12	2.0	45
DUP 014554	1.09	0.10	3.7	0.4	28.7	0.10	1.6	0.078	0.06	4.29	22	1.21	8.4	40
DUP 014586	0.94	0.07	3.4	0.3	43.5	0.07	1.0	0.097	0.06	0.46	28	1.38	3.8	55
STD BLANK	<0.01	<0.05	<0.1	<0.2	<0.5	<0.05	<0.2	<0.005	<0.05	<0.05	<1	<0.05	<0.5	<2
STD BLANK	<0.01	<0.05	<0.1	<0.2	<0.5	<0.05	<0.2	<0.005	<0.05	<0.05	<1	<0.05	<0.5	<2
STD BLANK	<0.01	<0.05	<0.1	<0.2	<0.5	<0.05	<0.2	<0.005	<0.05	<0.05	<1	<0.05	<0.5	<2
STD BLANK	<0.01	<0.05	<0.1	<0.2	<0.5	<0.05	<0.2	<0.005	<0.05	<0.05	<1	<0.05	<0.5	<2
STD BLANK	<0.01	<0.05	<0.1	<0.2	<0.5	<0.05	<0.2	<0.005	<0.05	<0.05	<1	<0.05	<0.5	<2
STD OREAS 25a	0.05	0.16	8.7	0.6	16.6	<0.05	10.8	0.064	0.19	1.47	126	<0.05	4.4	32
STD OREAS 600	1.68	10.58	2.0	6.8	36.3	6.78	4.7	<0.005	0.55	0.97	12	0.58	6.3	584
STD OREAS 25a	0.05	0.20	9.0	0.5	17.9	<0.05	10.9	0.057	0.20	1.51	108	<0.05	4.5	30
STD OREAS 600	1.69	3.49	2.2	6.6	37.2	6.41	5.0	<0.005	0.55	1.00	14	0.36	6.3	607
STD OREAS 25a	0.05	0.25	8.5	0.5	17.0	<0.05	10.3	0.055	0.20	1.52	120	<0.05	4.4	30

Appendix IV
Petrographic Report

PETROGRAPHIC REPORT ON 11 SAMPLES FROM SPIUS PROPERTY, B.C.

Report for: Gerry Carlson, President
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Invoice 190379

Sept. 18, 2019.

SUMMARY:
The intrusive rocks in this suite can be roughly summarized into weakly foliated biotite granodiorite (7 samples), porphyritic biotite granodiorite (2 samples) and biotite quartz latite porphyry (2 samples) as follows:

Biotite Granodiorite (SP-P-01, 03, 04, 06, 08, 10 and 11): medium-grained, weakly foliated biotite granodiorite composed of plagioclase, quartz, partly aligned biotite and minor interstitial Kspar, accessory opaques (mainly Fe-Ti oxides?) and apatite, with general weak clay?/sericite after plagioclase and chlorite-trace rutile after biotite (more significant alteration detailed below). Some samples contain an unidentified relict mafic mineral mostly pseudomorphed by very fine-grained clay?/chlorite-sericite-opaques.

Porphyritic Biotite Granodiorite (SP-P-02, 07): plagioclase, relict mafic (chlorite-trace rutile altered biotite) phenocrysts in fine-grained groundmass of Kspar-plagioclase-quartz-sericite (after biotite?)-accessory opaques (mostly Fe-Ti oxides, minor pyrite?), apatite. Possible groundmass "K-flooding" (fine-grained Kspar-quartz attacking margins of plagioclase crystals), weak clay?/sericite-chlorite.

Biotite Quartz Latite Porphyry (AP-P-05, 09): sparse plagioclase and biotite phenocrysts in very fine-grained groundmass of Kspar-quartz-plagioclase-sericite (after biotite?) with accessory opaques (Fe-Ti oxides?), apatite, affected by strong carbonate-minor albite?-clay?/sericite-muscovite-trace pyrite?-chlorite-rutile alteration.

Alteration is generally strongest in the weakly foliated granodiorite, typically controlled in and along envelopes containing variable Kspar-quartz-sericite/muscovite-carbonate-albite-chlorite, developed around thin, diffuse, poorly defined veins/veinlets of quartz-Kspar ±sulfides (mainly pyrite, minor chalcopyrite?)-carbonate. Kspar, local albite, and sericite generally replace plagioclase, and muscovite, chlorite, carbonate and sulfides replace former mafics (mainly biotite, some of which may have replaced former hornblende?). Thus the alteration is typically classified as relatively weak potassic (Kspar-quartz-albite), in places overprinted by phyllic (quartz-sericite/muscovite-carbonate) grading to propylitic (clay?/sericite-chlorite) in less altered wallrock farther from veins/veinlets. In the porphyritic granodiorite, alteration is weaker (possible pervasive groundmass K-flooding, with local potassic alteration along thin veinlets in one of the two samples). In the quartz latite porphyry, moderate to strong pervasive carbonate-sericite-albite?-trace chlorite alteration is accompanied only by rare thin carbonate veinlets, suggestive of mainly phyllic alteration. Identification and quantification of possible sulfide minerals is precluded by lack of polished surfaces.

Capsule descriptions are as follows:

SP-P-01: fine-grained biotite granodiorite with weak sericite-Kspar-biotite?-quartz-carbonate-chlorite-apatite-sphene alteration partly controlled along poorly defined veins/veinlets.

SP-P-02: plagioclase-possible mafic phyric, porphyritic biotite granodiorite with accessory opaques, apatite and rutile, with weak quartz-Kspar "flooding" and weak sericite-chlorite-trace carbonate alteration.

SP-P-03: medium-grained, foliated biotite granodiorite with distinct Kspar-quartz-muscovite/sericite-chlorite-pyrite ±carbonate alteration controlled along poorly defined veins/veinlets to 1 cm thick.

SP-P-04: strongly phyllic (quartz-sericite-carbonate-pyrite?-rutile) overprint on potassic (Kspar-albite?-quartz-apatite?) altered, weakly foliated granodiorite, associated with veins/veinlets of quartz-carbonate-muscovite-minor Kspar-pyrite ±chalcopyrite?

SP-P-05: plagioclase-biotite phyric, biotite quartz latite porphyry with accessory opaques (pyrite?), apatite and rutile, affected by strong carbonate-minor albite?-sericite alteration.

SP-P-06: medium-grained, foliated biotite granodiorite cut by diffuse Kspar-quartz-muscovite/sericite-chlorite-pyrite ±carbonate alteration controlled along poorly defined veinlets and associated envelopes to 1 cm thick.

SP-P-07: plagioclase-mafic phyric, porphyritic biotite granodiorite with accessory opaques, apatite and rutile, with weak quartz-Kspar "flooding" associated with diffuse quartz-Kspar-sericite-chlorite-pyrite-trace carbonate alteration along ill-defined veinlets.

SP-P-08: medium-grained, foliated biotite granodiorite with distinct Kspar-quartz-muscovite/sericite-pyrite ±chlorite-carbonate alteration controlled along poorly defined veins/veinlets <0.5 cm thick.

SP-P-09: plagioclase-biotite phyric, biotite quartz latite porphyry with accessory opaques (Fe-Ti oxides?), apatite and rutile, affected by strong carbonate-minor albite?-clay?/sericite-muscovite-trace chlorite alteration.

SP-P-10: medium-grained, weakly foliated biotite granodiorite with distinct Kspar-quartz overprinted by muscovite/sericite-pyrite-carbonate ± rutile alteration, largely controlled along a network of poorly defined veins/veinlets <2 mm thick.

SP-P-11: biotite-(relict unidentified mafic) granodiorite with accessory Fe-Ti oxide opaques and apatite, partly altered in a diffuse, paler-coloured zone to possible secondary Kspar ±quartz, clay?/sericite, chlorite and possible rutile.

Detailed petrographic descriptions and photomicrographs are appended (by email attachment). If you have any questions regarding the petrography, please do not hesitate to contact me.

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SP-P-01: FINE-GRAINED BIOTITE GRANODIORITE WITH WEAK SERICITE-KSPAR-BIOTITE?-QUARTZ-CARBONATE-CHLORITE-APATITE-SPHENE ALTERATION PARTLY CONTROLLED ALONG POORLY DEFINED VEINS/VEINLETS

Hand specimen not supplied; etched offcut shows fine-grained, felsic-looking intrusive rock cut by white quartz-Kspar veins along which poorly defined, irregular envelopes of secondary Kspar are developed. The rock is weakly magnetic, shows only local reaction to cold dilute HCl (along one thin veinlet), and weak yellow stain for K-feldspar (but extensive white etch for plagioclase, which the Kspar appears to replace). Modal mineralogy (regular thin section only) is approximately:

Plagioclase (weakly sericite-albite altered, oligoclase?)	55%
Quartz (mainly primary, minor secondary)	20%
K-feldspar (part primary/part secondary, controlled along veinlets)	10%
Biotite (locally partly secondary; rarely altered to chlorite)	5-7%
Sericite (after feldspars)	3-5%
Carbonate (mainly along veinlets/fractures; calcite, dolomite?)	1-2%
Opaque (mainly Fe-Ti oxides; trace sulfide seen in offcut)	1-2%
Chlorite (after biotite, or in patches along carbonate veinlets)	1%
Apatite (accessory and with carbonate-biotite along veinlets)	<1%
Sphene (after ilmenite?)	<1%

This sample consists of fine-grained, weakly sericitized plagioclase, quartz, minor Kspar and biotite roughly indicative of granodiorite composition. It is cut by a variety of poorly defined veinlets with variable Kspar, quartz, carbonate, biotite, chlorite, opaques and traces of apatite and sphene.

In the body of the rock, plagioclase forms interlocking, sub- to anhedral crystals mainly <2.5 mm diameter, typically <5-10% replaced by very fine sericite or clay?/sericite as randomly oriented subhedral flakes mostly <20 μm, and lesser carbonate <50 μm. Original composition of the locally weakly zoned crystals may have been oligoclase about An_{25}, based on extinction Y^010 to 8º and relief slightly negative compared to quartz, but in places (especially near veinlets with secondary Kspar) there may be some albite developed as fine interstitial crystals <0.5 mm. Quartz appears to be mainly interstitial and therefore primary, forming interlocking, ragged anhedra mostly <1 mm (but in aggregates to 2 mm) with minor strain indicated by weak undulose extinction/sub-grain development and suturing of grain boundaries. Kspar forming finer-grained interstitial sub/anhedra <0.5 mm is likely primary, but is difficult to distinguish from slightly coarser-grained secondary Kspar formed along veinlets. The mafic mineral is biotite, forming mainly euhedral flakes/small booklets <1 mm (medium brown pleochroism, rarely altered to chlorite; aggregates to 2 mm, with accessory carbonate, apatite, and sphene, partly distributed along narrow veinlets suggestive of minor secondary biotite). Chlorite replacing biotite shows distinct green pleochroism and length-fast anomalous birefringence, possibly more Fe-rich (F:M 0.6?) compared to matted chlorite along some veinlets. Apatite forms rounded sub/euhedra mainly <0.15, but rarely to 0.5 mm; it may be partly primary and partly secondary (remobilized?) along veinlets. A similar case may be made for opaques mostly <0.25 mm (probably mostly Fe-Ti oxides, but trace sulfides are seen in the offcut along veinlets) and sphene (brown, weakly pleochroic subhedra <0.15 mm).

Veins/veinlets range from diffuse zones up to 4.5 mm thick in which quartz and Kspar (both mainly sub/anhedral, to 1.2 mm, partly secondary after plagioclase?) are common, to thin planar types in which Kspar and carbonate are more abundant, minor local biotite (secondary?), apatite and sphene occur. Along one of the latter, an elongated patch 3 mm long of clay?/chlorite (matted minute randomly oriented flakes <12 μm with faint green colour, length-fast low first-order grey birefringence suggestive of magnesian composition, F:M 0.4?) is present.

In summary, this is fine-grained biotite granodiorite with weak sericite-Kspar-biotite?-quartz-carbonate-chlorite-apatite-sphene alteration partly controlled along poorly defined veins/veinlets.

SP-P-02: PLAGIOCLASE-POSSIBLE MAFIC PHYRIC, PORPHYRITIC BIOTITE GRANODIORITE WITH ACCESSORY OPAQUES, APATITE AND RUTILE, WITH WEAK QUARTZ-KSPAR "FLOODING" AND WEAK SERICITE-CHLORITE-TRACE CARBONATE ALTERATION

Hand specimen not supplied; etched offcut shows porphyritic, felsic-looking intrusive rock composed of white feldspar crystals (extensive white etch for plagioclase) in fine-grained dark grey (biotite-rich) groundmass. The rock is weakly magnetic, shows no reaction to cold dilute HCl, and weak yellow stain for K-feldspar (mainly in groundmass, probably primary, although trace Kspar appears to replace plagioclase). Modal mineralogy (regular thin section only) is approximately:

Plagioclase (weakly sericite ±Kspar altered, andesine-oligoclase?)	55%
Quartz (mainly primary, minor secondary groundmass "flooding"?)	15%
K-feldspar (primary/part secondary, groundmass "K-flooding"?)	10%
Biotite (locally partly secondary?; rarely altered to chlorite)	10%
Chlorite (after biotite)	5%
Sericite (after feldspars)	2-3%
Opaque (mainly Fe-Ti oxides; trace sulfide?)	1-2%
Apatite (accessory with relict mafic sites)	<1%
Rutile (after ilmenite?)	<1%
Carbonate (relict mafic sites; calcite, dolomite?)	<1%

This sample consists of weakly sericitized, zoned plagioclase and possible relict mafic phenocrysts in groundmass of fine-grained plagioclase, quartz, biotite/chlorite, minor Kspar, accessory opaques, apatite and rutile roughly indicative of porphyritic granodiorite. Weak groundmass quartz/Kspar flooding may be present, but veinlets are not evident.

Plagioclase forms mainly euhedral, sub- to euhedral crystals to 3 mm (glomeratic to 6 mm), typically <5-10% replaced by very fine sericite or clay?/sericite as subhedral flakes mostly <20 μm, typically oriented along microfractures, cleavage and twin planes. Oscillatory zoning is prominent with composition ranging from cores of andesine (An_{35-45}) to rims of oligoclase (An_{20-25}), based on extinction Y^010 of 20-30º to 0-8º respectively and relief slightly negative compared to quartz. In places there may be minor secondary Kspar developed at margins or along sericitic microfractures.

Probable former mafic phenocrysts are suggested by local aggregates of biotite/chlorite, accessory opaques, apatite and rutile, with sub- to euhedral rectangular outlines to ~3 mm. It is not obvious what these mafic phenocrysts originally were; the biotite could be secondary after amphibole.

In the groundmass, plagioclase is intimately mixed with quartz, biotite or chlorite all in the 0.1-0.5 mm size range, plus minor Kspar of similar size that appears to be mainly interstitial and therefore primary. Plagioclase is weakly sericitized as for phenocrysts, and quartz shows little strain indicated by weak undulose extinction/sub-grain development but no suturing of grain boundaries. Both quartz and Kspar forming sub/anhedra <0.2 mm appear to attack and replace the margins of plagioclase phenocrysts (quartz/Kspar "flooding"). Biotite forming mainly subhedral flakes <0.4 mm with medium brown pleochroism is commonly altered to chlorite (distinct green pleochroism, near-zero to weakly length-fast anomalous birefringence, F:M possibly 0.5-0.6?); closely associated with accessory opaques, apatite, rutile and trace carbonate. Apatite forms rounded sub/euhedra mainly <0.25 mm, opaques mostly <0.5 mm are probably mostly Fe-Ti oxides, but local sulfides (possibly chalcopyrite?) are rarely seen, rutile forms dark brown acicular subhedra mostly <20 μm, and carbonate anhedra mainly <45 μm.

In summary, this is plagioclase-possible mafic phyric, porphyritic biotite granodiorite with accessory opaques, apatite and rutile, with weak quartz-Kspar "flooding" and weak sericite-chlorite-trace carbonate alteration.

SP-P-03: MEDIUM-GRAINED, FOLIATED BIOTITE GRANODIORITE WITH DISTINCT KSPAR-QUARTZ-MUSCOVITE/SERICITE-CHLORITE-PYRITE ±CARBONATE ALTERATION CONTROLLED ALONG POORLY DEFINED VEINS/VEINLETS

Hand specimen not supplied; etched offcut shows medium-grained, weakly foliated possible granodiorite cut by pink/white quartz-Kspar ±sulfide veins along which poorly defined, irregular envelopes of secondary Kspar are developed. The rock is slightly magnetic, shows no reaction to cold dilute HCl, and weak yellow stain for K-feldspar (but extensive white etch for plagioclase, which Kspar appears to replace). Modal mineralogy (regular thin section only) is approximately:

Plagioclase (partly sericite altered, andesine-oligoclase?)	50%
Quartz (mainly primary, minor secondary along veinlets)	25%
K-feldspar (part primary/part secondary along veinlets)	10%
Biotite (locally partly secondary; rarely altered to chlorite)	5%
Clay?/sericite (after feldspars), muscovite (after mafics, near veinlets)	5%
Chlorite (after biotite), clay?/chlorite in relict mafic sites with carbonate	1-2%
Opaque (mainly Fe-Ti oxides but sulfides in veinlets)	1-2%
Carbonate (relict mafic sites/rare thin veinlets, mainly dolomite?)	1%
Apatite (accessory in mafic sites)	<1%
Acicular rutile, trace sphene (relict mafic sites, after ilmenite?)	<1%

This sample consists of medium-grained, weakly sericitized plagioclase, quartz, minor Kspar and foliated biotite/chlorite, accessory opaques, apatite and rutile typical of granodiorite. It is cut by a variety of poorly defined veinlets with variable Kspar, quartz, local carbonate, and sulfide.

In the weakly foliated rock, plagioclase forms interlocking, sub- to anhedral crystals up to 5 mm long, typically <5% (except close to veins, up to 10-20%) replaced by very fine sericite or clay?/sericite as randomly oriented subhedral flakes mostly <40 μm, and lesser carbonate <0.1 mm. Original composition of the locally weakly zoned crystals may be andesine-oligoclase about An_{35-25}, based on extinction Y^010 to 19º to 8º and relief slightly negative compared to quartz, but in places (especially near veinlets with secondary Kspar) some albite and Kspar is developed as subhedra to 1 mm. Quartz appears to be mainly interstitial and therefore primary, forming interlocking, ragged anhedra up to 2 mm (but in aggregates to 3 mm) with moderate strain indicated by common undulose extinction/sub-grain development, minor suturing of grain boundaries. Kspar forming finer-grained interstitial sub/anhedra <1 mm is likely primary, distinguished from coarser-grained, cloudy-looking secondary Kspar (subhedra to 2.5 mm) formed along veinlets. Mafics are mainly biotite, as mainly euhedral flakes <2 mm/aggregates to 4 mm partly replaced by chlorite (especially in envelopes up to 0.5 cm thick near the veins), locally associated with accessory carbonate, apatite, and rutile. Chlorite shows pale green pleochroism and near-zero/weakly length-fast anomalous birefringence, (F:M 0.5?) distinct from matted clay?/chlorite (minute randomly oriented flakes <15 μm with brownish colour, length-slow low first-order grey birefringence suggestive of kaolinite?) associated with sericite <25 μm surrounding patches ~1 mm in size of fine-grained carbonate (subhedra <0.15 mm, dolomite?) in different mafic relic sites up to 2 mm long. Apatite forms rounded sub/euhedral prisms mainly <0.3 mm, likely mainly primary. Opaques mostly <0.25 mm are probably mostly Fe-Ti oxides, but sulfides are definitely present along veinlets. Minor rutile (dark brown, acicular euhedra <15 μm) occurs with trace sphene mainly in chlorite after biotite.

Veins/veinlets are mostly diffuse zones up to ~1 cm thick in which quartz and Kspar (both mainly sub/anhedral, to 2.5 mm, partly secondary after plagioclase?) are common, with central sulfide (aggregates to 4 mm long of subhedra <1 mm, mainly pyrite?) closely associated with muscovite (euhedral flakes to 0.7 mm), mixed with chlorite (subhedral flakes to 0.5 mm, very pale green, length-fast grey birefringent, F:M 0.4?) likely after former mafics, and sericite mostly <0.1 mm, likely after plagioclase. There are also thin planar veinlets <50 μm in which carbonate occurs.

In summary, this is medium-grained, foliated biotite granodiorite with distinct Kspar-quartz-muscovite/sericite-chlorite-pyrite ±carbonate alteration controlled along poorly defined veins/veinlets to 1 cm thick.

SP-P-04: STRONGLY PHYLLIC (QUARTZ-SERICITE-CARBONATE-PYRITE?-RUTILE) OVERPRINT ON POTASSIC (KSPAR-ALBITE?-QUARTZ-APATITE?) ALTERED, WEAKLY FOLIATED GRANODIORITE, ASSOCIATED WITH VEINS/VEINLETS OF QUARTZ-CARBONATE-MUSCOVITE-MINOR KSPAR-PYRITE ±CHALCOPYRITE

Hand specimen not supplied; etched offcut shows medium-grained, weakly foliated felsic intrusive cut by grey/white quartz-sericite ±sulfide veins along which local poorly defined, irregular envelopes of secondary Kspar are developed. The rock is not magnetic, shows local minor reaction to cold dilute HCl (veinlets only), and weak yellow stain for K-feldspar (but extensive white etch for plagioclase, which may be extensively sericitized, and which Kspar appears to replace). Modal mineralogy (regular thin section only) is approximately:

Relict plagioclase (extensively sericite-carbonate-albite?-Kspar altered)	35%
Quartz (primary, secondary in poorly defined veinlets)	30%
Muscovite, sericite (after mafics, plagioclase)	20%
Carbonate (veinlets calcite, pervasive dolomite?)	7%
K-feldspar (mainly secondary, associated with veins)	5%
Opaque (mainly pyrite, minor chalcopyrite?)	2%
Rutile (relict mafic sites, with muscovite, pyrite?)	<1%
Apatite (fractured, relict primary accessory/party secondary?)	<1%

This sample is strongly phyllic (overprint on relic potassic?) altered so that protolith is obscured, but likely was weakly foliated granodiorite. Alteration is strongest near quartz-carbonate-muscovite-minor Kspar-sulfide veinlets/veins <0.1 mm up to 1 cm thick.

In least altered rock (furthest from the veins/veinlets) plagioclase forming subhedra up to ~3 mm long (locally glomeratic to ~6 mm) is extensively (20-50%) replace by variable mixtures of sericite (subhedral flakes mainly <0.1 mm) and carbonate (ragged anhedra mainly <0.2 mm, possibly dolomite?), both random oriented. In addition, the relict plagioclase shows a distinctive lamellar or skeletal appearance suggestive of replacement by thin ribbons of lower relief feldspar (Kspar?) in a host possibly albitized (?). Plagioclase composition is no longer determinable (twinning destroyed) but relief is distinctly negative compared to quartz, supportive of extensive albitization. Relict mafic sites up to ~5 mm long define the weak foliation, composed of sub-parallel aligned muscovite flakes (likely after biotite) up to 1 mm long, intergrown with opaques (likely mostly pyrite, rounded subhedra to 0.4 mm; accessory dark brown rutile as subhedra <25 μm) but only locally carbonate. Quartz is common as ragged, irregular aggregates to ~3 mm long composed of interlocking sub- to anhedra mainly <2 mm with weak to moderate strain (undulose extinction, sub-grain development, and suturing of grain boundaries) that is difficult to distinguish from secondary quartz of veinlets.

Close to veins/veinlets, sericite-carbonate replacement of plagioclase increases, and Kspar replacement of plagioclase/albite (?) increases, in an alteration envelope without clear distinction from the veins. The major veins consist of poorly defined sub-planar zones <4mm thick of secondary quartz (interlocking sub/anhedra mainly <1.5 mm with weak strain), carbonate (subhedra to 2 mm, likely calcite?), muscovite or sericite (as described above), opaque (mainly pyrite; minor chalcopyrite tentatively identified in the offcut) <1 mm, locally closely associated with apatite (fractured subhedra to ~1 mm, could be partly secondary?). Kspar, likely replacing plagioclase/albite, forms subhedra to ~1.5 mm, or is finer-grained and poorly defined along thin carbonate-filled veinlets.

In summary, this likely represents strongly phyllic (quartz-sericite-carbonate-pyrite?-rutile) overprint on potassic (Kspar-albite?-quartz-apatite?) altered, weakly foliated granodiorite, associated with veins/veinlets of quartz-carbonate-muscovite-minor Kspar-pyrite ±chalcopyrite?

SP-P-05: PLAGIOCLASE-BIOTITE PHYRIC, BIOTITE QUARTZ LATITE PORPHYRY WITH ACCESSORY OPAQUES (PYRITE?), APATITE AND RUTILE, AFFECTED BY STRONG CARBONATE-MINOR ALBITE?-SERICITE ALTERATION

Hand specimen not supplied; etched offcut shows distinctly porphyritic, fine-grained, pinkish-grey felsic intrusive with minor disseminated sulfides. The rock is locally slightly magnetic, shows widespread pervasive rapid reaction to cold dilute HCl, and pervasive yellow stain for K-feldspar in the groundmass (white etch for plagioclase phenocrysts). Modal mineralogy (regular thin section only) is approximately:

Plagioclase (phenocrysts/minor groundmass, calcite-albite altered)	30%
K-feldspar (groundmass only, mainly primary?)	25%
Carbonate (mainly calcite?)	20%
Quartz (groundmass only, mainly primary?)	15%
Biotite (small phenocrysts, part altered to muscovite-trace chlorite-rutile)	5%
Sericite (after feldspars), muscovite (after biotite)	3%
Opaque (partly pyrite?)	1%
Apatite (primary accessory, in biotite sites)	<1%
Rutile (in altered biotite sites)	<1%

This sample consists of albite?-calcite altered plagioclase and virtually fresh biotite phenocrysts in groundmass of fine-grained Kspar, plagioclase, quartz, variable carbonate, minor sericite, accessory opaques, apatite and rutile roughly indicative of quartz latite. Groundmass quartz/Kspar appears primary, and veinlets are not evident.

Plagioclase forms mainly euhedral, sub- to euhedral crystals to 3 mm (glomeratic to 5 mm), typically 5-15% replaced by carbonate as subhedra to 0.7 mm (mainly calcite?) plus trace very fine sericite as randomly oriented subhedral flakes mostly <20 μm, or rarely sieved by clay?/chlorite as minute matted flakes <5 μm with low first-order grey birefringence. Zoning is not seen but twinning suggests it may have been albitized (An_{5-10}), based on extinction Y^010 of 10º and Z^001 of 8º plus relief negative compared to quartz but slightly positive compared to Kspar at margins.

Biotite phenocrysts show mainly euhedral outlines to about 2.5 mm (partly glomeratic), locally partly altered by muscovite (euhedral flakes to 1 mm, partly plucked out, or trace chlorite <0.2 mm, accompanied by trace rutile as minute acicular euhedra <15 μm), associated with accessory opaques (sub/euhedral crystals <0.4 mm; cubic shape and appearance in offcut suggests pyrite?) and apatite (stubby prismatic euhedra <0.15 mm). Carbonate is mostly absent from biotite sites.

In the groundmass, Kspar dominates as interlocking subhedra mainly <0.2 mm, mixed with variable plagioclase as euhedral microlites <0.15 mm long, interstitial quartz as sub/anhedra <0.1 mm, plus minor sericite (euhedral flakes <0.1 mm, possibly after former biotite?). Most Kspar and quartz appears to be mainly interstitial and therefore primary. Variable carbonate alteration ranges from weak to intense, locally replacing 90%of the rock over patches up to 5 mm across as interlocking, subhedral crystals up to about 0.8 mm (possibly controlled along poorly defined veinlets, likely mainly calcite?). Rare thin carbonate veinlets are sub-planar to irregular, <0.1 mm thick. Quartz shows little strain indicated by weak undulose extinction/sub-grain development but no suturing of grain boundaries.

In summary, this is plagioclase-biotite phyric, biotite quartz latite porphyry with accessory opaques (pyrite?), apatite and rutile, affected by strong carbonate-minor albite?-sericite alteration.

SP-P-06: MEDIUM-GRAINED, FOLIATED BIOTITE GRANODIORITE CUT BY DIFFUSE KSPAR-QUARTZ-MUSCOVITE/SERICITE-CHLORITE-PYRITE ±CARBONATE ALTERATION CONTROLLED ALONG POORLY DEFINED VEINLETS AND ASSOCIATED ENVELOPES TO 1 CM THICK

Hand specimen not supplied; etched offcut shows medium-grained, weakly foliated possible granodiorite cut by grey quartz-sericite ±sulfide-Kspar veins with poorly defined, irregular envelopes of sericite-secondary Kspar along them. The rock is weakly magnetic, shows no reaction to cold dilute HCl, and weak yellow stain for K-feldspar (but extensive white etch for plagioclase, which Kspar appears to partly replace). Modal mineralogy (regular thin section only) is approximately:

Plagioclase (partly clay?/sericite altered, oligoclase?)	50%
Quartz (mainly primary, minor secondary along veinlets)	25%
K-feldspar (part primary/part secondary along veinlets)	10%
Biotite (partly altered to chlorite, sericite/muscovite ±rutile)	5%
Clay?/sericite (after feldspars), muscovite (after mafics, near veinlets)	5%
Chlorite (after biotite)	2-3%
Opaque (Fe-Ti oxides; sulfides in veinlets)	1-2%
Carbonate (after plagioclase, near veinlets only, dolomite?)	<1%
Apatite (accessory in mafic sites)	<1%
Acicular rutile (relict mafic sites, with chlorite/muscovite)	<1%

This sample consists of medium-grained, weakly sericitized plagioclase, quartz, minor Kspar and foliated biotite/chlorite, accessory opaques, apatite and rutile typical of granodiorite. It is cut by a poorly defined veinlet with variable quartz, muscovite/sericite, Kspar and local sulfide.

In the weakly foliated rock, plagioclase forms interlocking, sub- to anhedral crystals up to 8 mm long, typically 5% (except close to veins, up to 10-20%) replaced by very fine sericite or clay?/sericite as randomly oriented subhedral flakes mostly <40 μm, and lesser carbonate <0.1 mm. Original composition of the locally weakly zoned crystals may be oligoclase about An_{25}, based on extinction Y^010 to 8º and X^001 of 5º with relief slightly negative compared to quartz, but in places (especially near veinlets with secondary Kspar) some Kspar is developed as subhedra to 1.5 mm. Quartz appears to be mainly interstitial and therefore primary, forming interlocking, ragged anhedra up to 2 mm (but in aggregates to 3 mm) with moderate-strong strain indicated by common undulose extinction/sub-grain development, minor suturing of grain boundaries. Kspar forming finer-grained interstitial sub/anhedra <0.5 mm is likely primary, distinguished from coarser-grained, more cloudy secondary Kspar formed along veinlets. Mafics are mainly biotite, as mainly euhedral flakes <3 mm/aggregates to 4 mm partly replaced by chlorite (especially in envelopes up to 1 cm thick near the veins), locally associated with trace accessory carbonate, apatite, and rutile. Chlorite shows pale green pleochroism and weakly length-slow anomalous purple/blue birefringence, (F:M 0.6?). Apatite forms rounded sub/euhedral prisms mainly <0.4 mm long, likely mainly primary. Opaques mostly <0.25 mm are probably mostly Fe-Ti oxides, but sulfides are definitely present along veinlets. Minor rutile (dark brown, acicular euhedra <15 μm) occurs in chlorite after biotite.

Veinlets are mostly diffuse zones <0.5 cm thick in which quartz and Kspar (both mainly sub/anhedral, to 2.5 mm, partly secondary after plagioclase?) are common, with central sulfide (aggregates to 2 mm long of subhedra <1 mm, mainly pyrite?) closely associated with muscovite (euhedral flakes to 0.7 mm), mixed with rare chlorite (subhedral flakes <0.2 mm, very pale green, length-fast grey birefringent, F:M 0.4?) likely after former mafics, and sericite mostly <0.1 mm, likely after plagioclase. Kspar locally replacing plagioclase (especially at cores; see etched offcut) occurs as ragged, sub/anhedral crystals to 1.5 mm that are brownish (strongly clouded by clay? as minute flakes mostly <5μm). Traces of carbonate (subhedra <0.1 mm, possibly dolomite?) accompany clay?/sericite alteration of plagioclase.

In summary, this is medium-grained, foliated biotite granodiorite cut by diffuse Kspar-quartz-muscovite/sericite-chlorite-pyrite ±carbonate alteration controlled along poorly defined veinlets and associated envelopes to 1 cm thick.

SP-P-07: PLAGIOCLASE-MAFIC PHYRIC, PORPHYRITIC BIOTITE GRANODIORITE WITH ACCESSORY OPAQUES, APATITE AND RUTILE, WITH WEAK QUARTZ-KSPAR "FLOODING" ASSOCIATED WITH DIFFUSE QUARTZ-KSPAR-SERICITE-CHLORITE-PYRITE-TRACE CARBONATE ALTERATION ALONG ILL-DEFINED VEINLETS

Hand specimen not supplied; etched offcut shows medium-grained, weakly porphyritic white/black granodiorite cut by poorly defined, irregular veinlets/envelopes of sericite-secondary Kspar-minor sulfide along them. The rock is weakly magnetic, shows no reaction to cold dilute HCl, and local yellow stain for K-feldspar (extensive white etch for plagioclase, which Kspar appears to replace along veinlets). Modal mineralogy (regular thin section only) is approximately:

Plagioclase (sericite ±carbonate, Kspar altered, andesine-oligoclase?)	55%
Quartz (mainly primary, minor secondary groundmass "flooding"?)	15%
K-feldspar (primary/part secondary, groundmass "K-flooding"?)	10%
Biotite (largely altered to chlorite ±muscovite, carbonate, rutile)	5-7%
Chlorite (after biotite)	5-7%
Sericite (after feldspars)	2-3%
Carbonate (relict mafic sites; calcite, dolomite?)	1-2%
Opaque (mainly Fe-Ti oxides; pyrite?)	1-2%
Apatite (accessory with relict mafic sites)	<1%
Rutile (after ilmenite?)	<1%

This sample consists of weakly sericitized, zoned plagioclase and chloritized relict mafic phenocrysts (biotite?) in groundmass of fine-grained plagioclase, quartz, biotite/chlorite, minor Kspar, accessory opaques and apatite roughly indicative of porphyritic granodiorite. Weak groundmass quartz/Kspar flooding may accompany diffuse potassic/phyllic alteration along veinlets.

Plagioclase forms mainly euhedral, sub- to euhedral crystals to 3 mm (glomeratic to 6 mm), typically <5-10% replaced by very fine sericite or clay?/sericite as subhedral flakes mostly <30 μm, typically oriented along microfractures, cleavage and twin planes but becoming coarser and more random, with carbonate to 0.2 mm, near ill-defined veinlets. Oscillatory zoning is common with composition ranging from cores of andesine (An_{35-50}) to rims of oligoclase (An_{20-25}), based on extinction Y^010 of 18-30º to 0-8º respectively and relief slightly negative compared to quartz. In places minor secondary Kspar appears to be developed at margins or along sericitic microfractures.

Probable former mafic phenocrysts are suggested by local aggregates of biotite/chlorite and rutile, accessory opaques <0.5 mm (Fe-Ti oxides locally replaced by pyrite?) and apatite (euhedral prisms <0.15 mm), with sub- to euhedral rectangular outlines to ~3 mm. It is not obvious what these mafic phenocrysts originally were; the biotite could be secondary after amphibole. Biotite forms subhedral (corroded) flakes <1 mm with pale brown relict pleochroism; chlorite forms subhedral flakes of similar size with pale green pleochroism, variable near-zero to slightly length-fast to slow, anomalous greenish, greyish, purplish of rarely bluish birefringence suggestive of F:M ~0.5 (?), containing rutile as minute dark brown acicular crystals <20 μm. In places, the chlorite is accompanied by minor muscovite <0.35 mm or carbonate <0.25 mm.

In the groundmass, plagioclase is intimately mixed with quartz, biotite or chlorite all in the 0.1-0.5 mm size range, plus minor Kspar of similar size that appears to be mainly interstitial and therefore primary (but see below; except near ill-defined veinlets, where it may be mostly secondary). Plagioclase is weakly sericitized as for phenocrysts, and quartz shows little strain indicated by weak undulose extinction/sub-grain development but no suturing of grain boundaries. Both quartz and Kspar forming sub/anhedra <0.2 mm appear to attack and replace the margins of plagioclase phenocrysts (quartz/Kspar "flooding", possibly stronger near ill-defined veinlets along which minor sulfides occur. Biotite forming mainly subhedral flakes <0.4 mm with medium brown pleochroism is commonly altered to chlorite as described above, associated with apatite and opaques (oxides/pyrite?).

In summary, this is plagioclase-mafic phyric, porphyritic biotite granodiorite with accessory opaques, apatite and rutile, with weak quartz-Kspar "flooding" associated with diffuse quartz-Kspar-sericite-chlorite-pyrite-trace carbonate alteration along ill-defined veinlets.

SP-P-08: MEDIUM-GRAINED, FOLIATED BIOTITE GRANODIORITE WITH DISTINCT KSPAR-QUARTZ-MUSCOVITE/SERICITE-PYRITE ±CHLORITE-CARBONATE ALTERATION CONTROLLED ALONG POORLY DEFINED VEINS/VEINLETS

Hand specimen not supplied; etched offcut shows medium-grained, weakly foliated probable granodiorite cut by thin pink/white quartz-Kspar ±sulfide veins along which poorly defined, irregular envelopes of secondary Kspar are developed. The rock is distinctly magnetic, shows no reaction to cold dilute HCl, and local yellow stain for K-feldspar (but extensive white etch for plagioclase, which Kspar appears to replace along veins). Modal mineralogy (regular thin section only) is approximately:

Plagioclase (partly sericite-carbonate-albite?-Kspar altered, oligoclase?)	50%
Quartz (mainly primary, minor secondary along veinlets)	25%
K-feldspar (part primary/part secondary along veinlets)	10%
Biotite (locally partly altered to chlorite)	5%
Clay?/sericite (after feldspars), muscovite (after mafics, near veinlets)	5%
Chlorite (after biotite)	1-2%
Opaque (minor Fe-Ti oxides, but sulfides in veinlets)	1-2%
Carbonate (mainly with sericite after plagioclase, dolomite?)	1%
Apatite (accessory in mafic sites)	<1%
Acicular rutile (relict mafic sites, with chlorite after biotite)	<1%

This sample consists of medium-grained, weakly sericitized plagioclase, quartz, minor Kspar and foliated biotite/chlorite, accessory opaques, apatite and rutile typical of granodiorite. It is cut by a variety of poorly defined veinlets with variable Kspar, quartz, muscovite, local carbonate, and sulfide.

In the weakly foliated rock, plagioclase forms interlocking, sub- to anhedral crystals up to 6 mm long, typically <5% (except close to veins, up to 10-50%) replaced by very fine clay?/sericite or sericite as randomly oriented subhedral flakes mostly <15 μm or up to 0.1 mm respectively and lesser carbonate <0.2 mm. Original composition of the locally weakly zoned crystals may be oligoclase about An_{20}, based on extinction Y^010 1º to 3º and relief slightly negative compared to quartz, but (near veinlets with secondary Kspar) some albite (Y^010=12º) and Kspar is developed as subhedra to 1 mm (commonly sericitized). Quartz appears to be mainly interstitial and therefore primary, forming interlocking, ragged anhedra up to 3 mm (but in aggregates to 5 mm) with moderate strain indicated by common undulose extinction/sub-grain development, minor suturing of grain boundaries. Kspar forming finer-grained interstitial sub/anhedra <1 mm is likely primary, distinguished from partly coarser-grained, cloudy-looking secondary Kspar (subhedra to 2.5 mm) formed along veinlets. Mafics are mainly biotite, as euhedral flakes <2 mm/aggregates to 4 mm partly replaced by chlorite (except near veins where they are replaced by muscovite), locally associated with accessory carbonate, apatite, and rutile. Chlorite shows pale green pleochroism and near-zero/weakly length-slow blue anomalous birefringence, (F:M 0.5?). Biotite/chlorite rarely enclose relict mafics of uncertain identity (euhedral rectangular to 2 mm long, high relief, colourless, low first-order length-fast parallel extinction) pseudomorphed by clay?/chlorite-sericite <25 μm, minute cubic opaques <15 μm. Apatite forms rounded sub/euhedral prisms mainly <0.3 mm, likely mainly primary. Opaques mostly <0.25 mm are probably Fe-Ti oxides, but sulfides to 1.5 mm (mainly pyrite?) are present along veinlets. Minor rutile (dark brown, acicular euhedra <15 μm) occurs in chlorite after biotite.

Veins/veinlets are mostly diffuse zones <0.5 cm thick in which quartz and Kspar (both mainly sub/anhedral, <0.5 mm, partly secondary after plagioclase?) are common, with central sulfide (local aggregates to 2 mm long of subhedra <1 mm, mainly pyrite?), closely associated with muscovite (euhedral flakes to 0.5 mm), local chlorite (subhedral flakes to 0.5 mm, very pale green, length-fast grey birefringence, F:M 0.4?) likely after former mafics, and sericite mostly <0.1 mm, likely after plagioclase. There is also minor carbonate as subhedra <0.2 mm, after mafics or plagioclase.

In summary, this is medium-grained, foliated biotite granodiorite with distinct Kspar-quartz-muscovite/sericite-pyrite ±chlorite-carbonate alteration controlled along poorly defined veins/veinlets <0.5 cm thick.

SP-P-09: PLAGIOCLASE-BIOTITE PHYRIC, BIOTITE QUARTZ LATITE PORPHYRY WITH ACCESSORY OPAQUES (FE-TI OXIDES?), APATITE AND RUTILE, AFFECTED BY STRONG CARBONATE-MINOR ALBITE?-CLAY?/SERICITE-MUSCOVITE-TRACE CHLORITE ALTERATION

Hand specimen not supplied; etched offcut shows distinctly porphyritic, fine-grained, pinkish-buff/grey felsic intrusive with minor disseminated biotite. The rock is weakly magnetic, shows slow but widespread pervasive rapid reaction to cold dilute HCl, and pervasive, but poorly developed yellow stain for K-feldspar in the groundmass (variable white etch for plagioclase phenocrysts). Modal mineralogy (regular thin section only) is approximately:

Plagioclase (phenocrysts/minor groundmass, carbonate-clay? altered)	40%
K-feldspar (groundmass only, mainly primary?)	25%
Carbonate (mainly dolomite?)	15%
Quartz (groundmass only, mainly primary?)	10%
Biotite (small phenocrysts, part altered to muscovite-trace chlorite-rutile)	5%
Clay?/sericite (after feldspars), muscovite (after biotite)	3%
Opaque (mainly Fe-Ti oxides?)	1%
Chlorite (after biotite)	<1%
Apatite (primary accessory, in biotite sites)	<1%
Rutile (in altered biotite sites)	<1%

This sample consists of clay?/sericite-carbonate altered plagioclase and mainly fresh biotite phenocrysts in groundmass of fine-grained Kspar, plagioclase, quartz, variable carbonate, minor sericite, accessory opaques, apatite and rutile roughly indicative of quartz latite. Groundmass quartz/Kspar appears primary, and veinlets are not evident.

Plagioclase forms mainly euhedral, sub- to euhedral crystals to 3 mm (glomeratic to 5 mm), typically 10-25% replaced by carbonate (sub/euhedra to 0.7 mm, mainly dolomite?), or variably sieved by clay?/chlorite as minute matted flakes <5 μm with low first-order grey birefringence, trace very fine sericite (randomly oriented subhedral flakes mostly <25 μm). Zoning is not seen but twinning suggests it may be partly albitized oligoclase (An_{10-15}), based on extinction Y^010 of 12º to 8º plus relief slightly negative compared to quartz but slightly positive compared to Kspar at margins.

Biotite phenocrysts show mainly euhedral outlines to about 2.5 mm (partly glomeratic), locally partly altered by muscovite (euhedral flakes to 1 mm, partly plucked out, or trace chlorite <0.2 mm, accompanied by trace rutile as minute acicular euhedra <15 μm), associated with accessory opaques (sub/euhedral crystals <0.4 mm; dark colour and appearance in offcut suggests Fe-Ti oxides?) and apatite (stubby prismatic euhedra <0.15 mm). Chlorite forming subhedral flakes to 0.5 mm shows pale green pleochroism, length-slow weakly anomalous birefringence suggestive of F:M 0.5-0.6 (?). Carbonate is mostly absent from biotite sites.

In the groundmass, Kspar dominates as interlocking subhedra mainly <0.25 mm, mixed with significant plagioclase as euhedral microlites <0.15 mm long, interstitial quartz as sub/anhedra <0.1 mm, and sericite (euhedral flakes <0.1 mm, possibly after former biotite?). Most Kspar and quartz appears to be mainly interstitial and therefore primary. Variable carbonate alteration ranges from weak to moderate, locally replacing 30%of the rock over patches up to 3 mm across as interlocking, sub/anhedral crystals mainly <0.5 mm (possibly partly controlled along poorly defined veinlets, possibly mainly dolomite to explain slow reaction in offcut?). Rare thin carbonate veinlets are sub-planar to irregular, <0.1 mm thick. Quartz shows little strain indicated by weak undulose extinction/sub-grain development but no suturing of grain boundaries.

In summary, this is plagioclase-biotite phyric, biotite quartz latite porphyry with accessory opaques (Fe-Ti oxides?), apatite and rutile, affected by strong carbonate-minor albite?-clay?/sericite-muscovite-trace chlorite alteration.

SP-P-10: MEDIUM-GRAINED, WEAKLY FOLIATED BIOTITE GRANODIORITE WITH DISTINCT KSPAR-QUARTZ OVERPRINTED BY MUSCOVITE/SERICITE-PYRITE-CARBONATE ± RUTILE ALTERATION, LARGELY CONTROLLED ALONG A NETWORK OF POORLY DEFINED VEINS/VEINLETS <2 MM THICK

Hand specimen not supplied; etched offcut shows medium-grained, weakly foliated pale buff-white altered granodiorite cut by a network of thin grey/white quartz-Kspar ±sulfide veins along which poorly defined, irregular envelopes of secondary Kspar are developed. The rock is not magnetic, shows minor slow reaction to cold dilute HCl (only where scratched), and local yellow stain for K-feldspar (but extensive white etch for plagioclase, which Kspar appears to replace along veins). Modal mineralogy (regular thin section only) is approximately:

Plagioclase (partly sericite-carbonate-albite?-Kspar altered, oligoclase?)	45%
Quartz (partly primary, partly secondary along veinlets)	25%
K-feldspar (part primary/part secondary along veinlets)	15%
Sericite (after plagioclase), muscovite (after mafics)	5-7%
Carbonate (mainly after mafics/in veinlets, dolomite?)	5%
Biotite (relict, carbonate-muscovite-rutile altered)	2%
Opaque (mainly sulfides, pyrite ±chalcopyrite?)	1%
Apatite (primary accessory, associated with relict mafic sites)	<1%
Rutile (in relict mafic sites)	<1%

This sample is more pervasively (potassic/phyllic) altered than other samples, consisting of the same plagioclase-quartz-minor biotite-Kspar as in other granodiorite samples, but the biotite is more extensively replaced by muscovite-carbonate (buff-coloured in the offcut) and the network of thin Kspar-quartz ±sulfide veinlets is better developed.

In the weakly foliated rock, plagioclase forms interlocking, sub- to anhedral crystals mainly <3 mm but up to 6 mm long, typically 5-10% (except close to veins, 10-20%) replaced by very fine clay?/sericite or sericite as randomly oriented subhedral flakes mostly <15 μm or up to 0.1 mm respectively and variable carbonate (ragged anhedra <0.25 mm). Original composition of the almost unzoned crystals may be oligoclase about An_{20}, based on extinction Y^010 1º to 3º and relief slightly negative compared to quartz, but (near veinlets with secondary Kspar) some albite (distinct negative relief compared to quartz) and Kspar is developed as subhedra to 1 mm (clouded by clay?/sericite). Quartz appears to be mainly interstitial and therefore primary, forming interlocking, ragged anhedra <2.5 mm (aggregates to 5 mm along foliation) with moderate strain indicated by common undulose extinction/sub-grain development, minor suturing of grain boundaries. Kspar forming finer-grained interstitial sub/anhedra <0.5 mm is likely primary, distinguished from partly coarser-grained, cloudy-looking secondary Kspar (subhedra to 1.5 mm) formed along veinlets. Mafics were mainly biotite, as euhedral flakes <1 mm/aggregates to 3 mm largely replaced (especially near veins) by muscovite (subhedral flakes to ~1 mm) and carbonate (subhedra <0.5 mm, dolomite?) associated with accessory apatite (rounded sub/euhedral prisms to 0.5 mm, likely mainly primary), and rutile (dark brown, acicular euhedra <15 μm). Chlorite is essentially absent. Opaques mostly <0.35 mm are either probable Fe-Ti oxides, or sulfides to 1.5 mm (mainly pyrite; trace chalcopyrite?) along veinlets.

Veins/veinlets are mostly diffuse zones <0.5 cm thick in which quartz and Kspar (both mainly sub/anhedral, <1 mm, largely secondary after plagioclase?) are abundant, with central thin veinlets (<1.5 mm) of quartz (interlocking sub/anhedra <2 mm long)-sulfide (local aggregates to 2 mm long of subhedra <1 mm, mainly pyrite?)-local carbonate (sub/euhedra <0.75 mm, dolomite?) are closely associated with muscovite (euhedral flakes to 0.5 mm) and carbonate (subhedra <0.35mm, dolomite?) likely after former mafics, plus sericite mostly <0.1 mm, likely after plagioclase.

In summary, this is medium-grained, weakly foliated biotite granodiorite with distinct Kspar-quartz overprinted by muscovite/sericite-pyrite-carbonate ± rutile alteration, largely controlled along a network of poorly defined veins/veinlets <2 mm thick.

SP-P-11: BIOTITE-(RELICT UNIDENTIFIED MAFIC) GRANODIORITE WITH ACCESSORY FE-TI OXIDE OPAQUES AND APATITE, PARTLY ALTERED IN A DIFFUSE, PALER-COLOURED ZONE TO POSSIBLE SECONDARY KSPAR ±QUARTZ, CLAY?/SERICITE, CHLORITE AND POSSIBLE RUTILE

Hand specimen not supplied; etched offcut shows pale buff-white altered zone (?) possibly with secondary Kspar developed, cutting medium-grained, weakly foliated black/white biotite granodiorite. The rock is magnetic, shows no reaction to cold dilute HCl (even where scratched), and local yellow stain for K-feldspar (but extensive white etch for plagioclase, which Kspar appears to replace in a diffuse zone). Modal mineralogy (regular thin section only) is approximately:

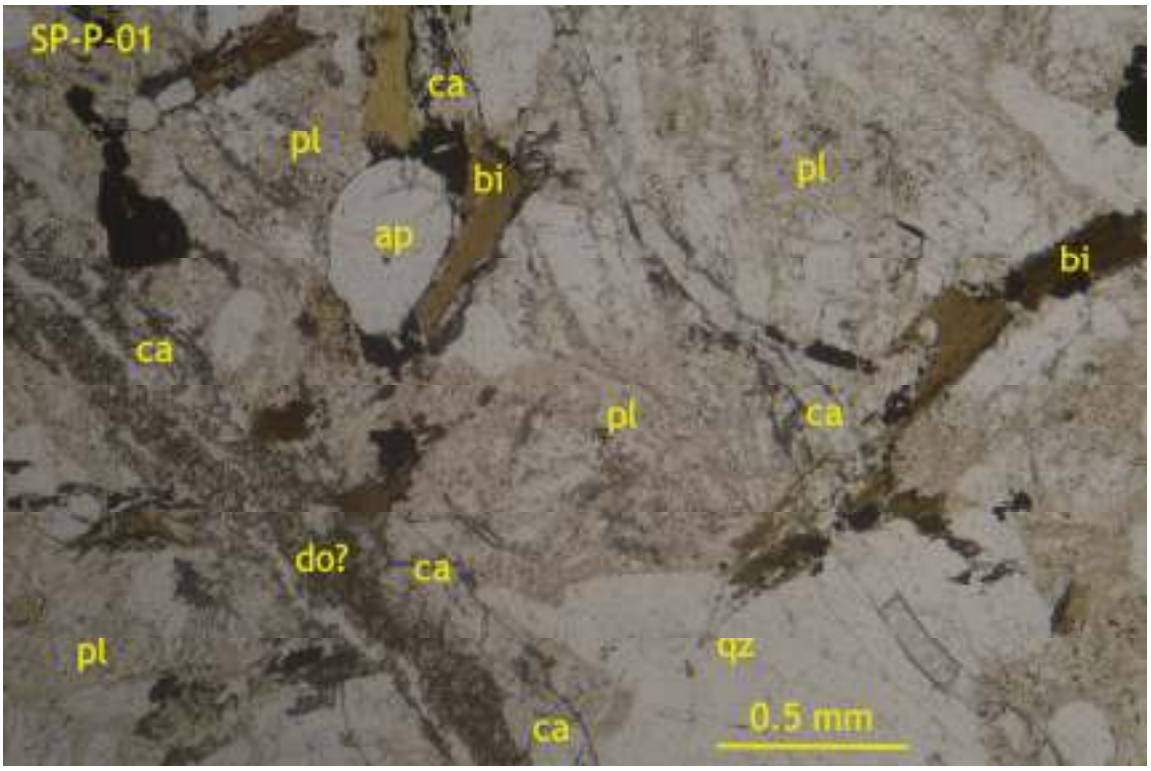
Plagioclase (partly clay?/sericite-Kspar altered, oligoclase?)	55%
Quartz (partly primary, partly secondary?)	20%
K-feldspar (part primary/part secondary?)	10%
Biotite (partly altered to chlorite)	10%
Clay?, sericite (after plagioclase), local unidentified relict mafics	2%
Opaques (mainly Fe-Ti oxides, associated with mafic sites)	1-2%
Chlorite (after biotite)	1%
Sphene (with mafic sites, Fe-Ti oxides, apatite)	<1%
Apatite (mainly primary, with mafic sites)	<1%

In this sample, weakly foliated granodiorite with biotite/unidentified relict mafics is cut by a vaguely defined zone in which Kspar may be more common (partly secondary?) and relict mafics are partly "bleached" (altered to clay?/sericite-chlorite, associated with opaques, sphene and apatite.

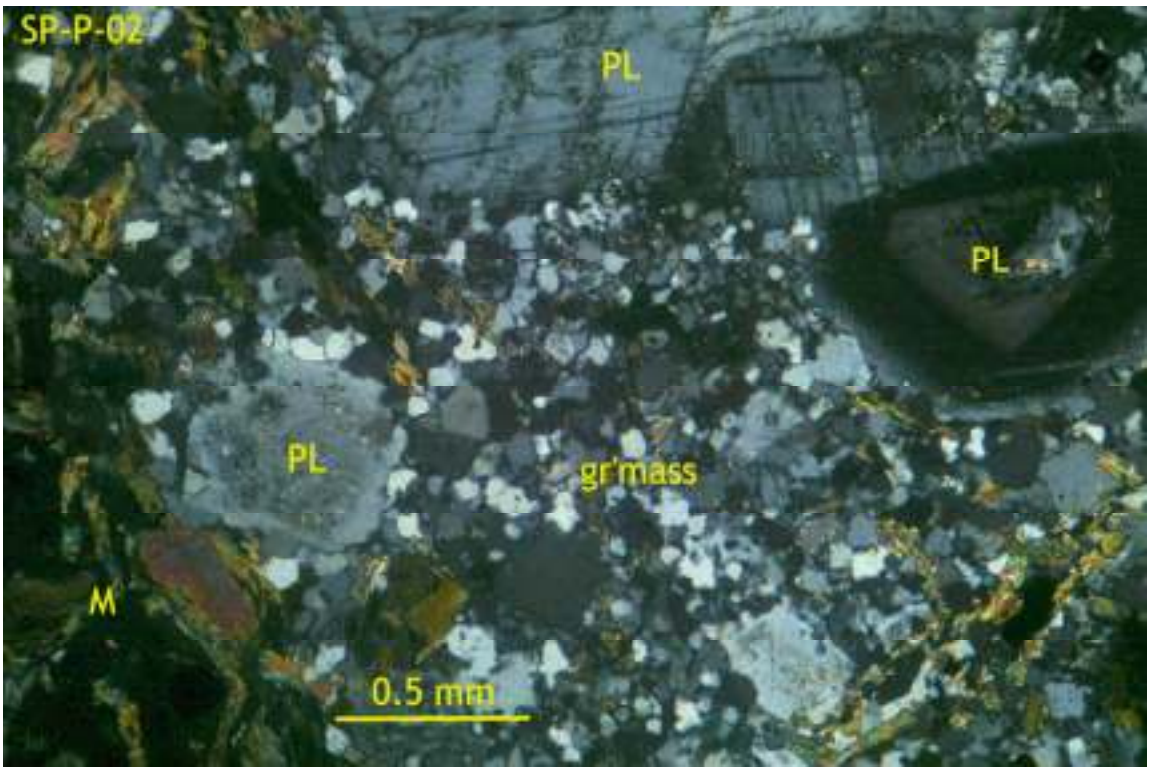
In the least altered, weakly foliated granodiorite, plagioclase forms interlocking, sub- to anhedral crystals mainly <3 mm but up to 6 mm long, typically <5-10% replaced by very fine clay?/sericite or sericite as randomly oriented subhedral flakes mostly <15 μm or <35 μm respectively, commonly along cleavage/twins or at rims. Original composition of the almost unzoned crystals may be oligoclase about An_{25}, based on extinction Y^010 5º to 7º and relief difficult to distinguish from quartz,. Quartz appears to be mainly interstitial and therefore primary, forming interlocking, ragged anhedra <2.5 mm (aggregates to 5 mm along foliation) with mainly weak strain indicated by weak extinction/sub-grain development, minor suturing of grain boundaries. Kspar forming finer-grained interstitial sub/anhedra <0.5 mm is likely primary, distinguished from partly coarser-grained, cloudy-looking secondary Kspar (in the pale colour zone, see below). Mafics are mainly biotite, as euhedral flakes <1 mm/aggregates to 3 mm partly interleaved or replaced by chlorite, and typically associated with accessory apatite (rounded sub/euhedral prisms to 0.5 mm, likely mainly primary), and possible rutile (dark brown to opaque sub/euhedra <20 μm). Chlorite forms sub/euhedral flakes to ~1 mm (pale green pleochroic, near-zero to weakly length-slow, anomalous purple birefringence suggestive of F:M ~0.5?). Opaques mostly <0.35 mm appear to be probably mostly Fe-Ti oxides. Some of the aligned mafic aggregates include the unidentified relict mafics (with elongated or rectangular outlines to ~2 mm, pseudomorphed by very fine-grained clay?/chlorite with low birefringence, lesser sericite with moderate birefringence, and minute opaques) seen in several samples of this suite (especially SP-P-08, where corroded relics remain in cores).

In the poorly defined pale-coloured, more altered zone, margins of plagioclase appear to be partly replaced by Kspar which is developed as subhedra to 1 mm (with distinct negative relief compared to quartz, typically clouded brownish by clay?/sericite). Some quartz may be secondary, or at least recrystallized, where it occurs as tightly interlocking, fine-grained aggregates of sub/anhedra mainly <0.5 mm with local moderate strain (stronger undulose extinction, sub-grain development, and suturing of grain boundaries than in coarse crystals elsewhere). Biotite in this zone may be somewhat more "bleached", i.e. altered to chlorite-clay?/sericite).

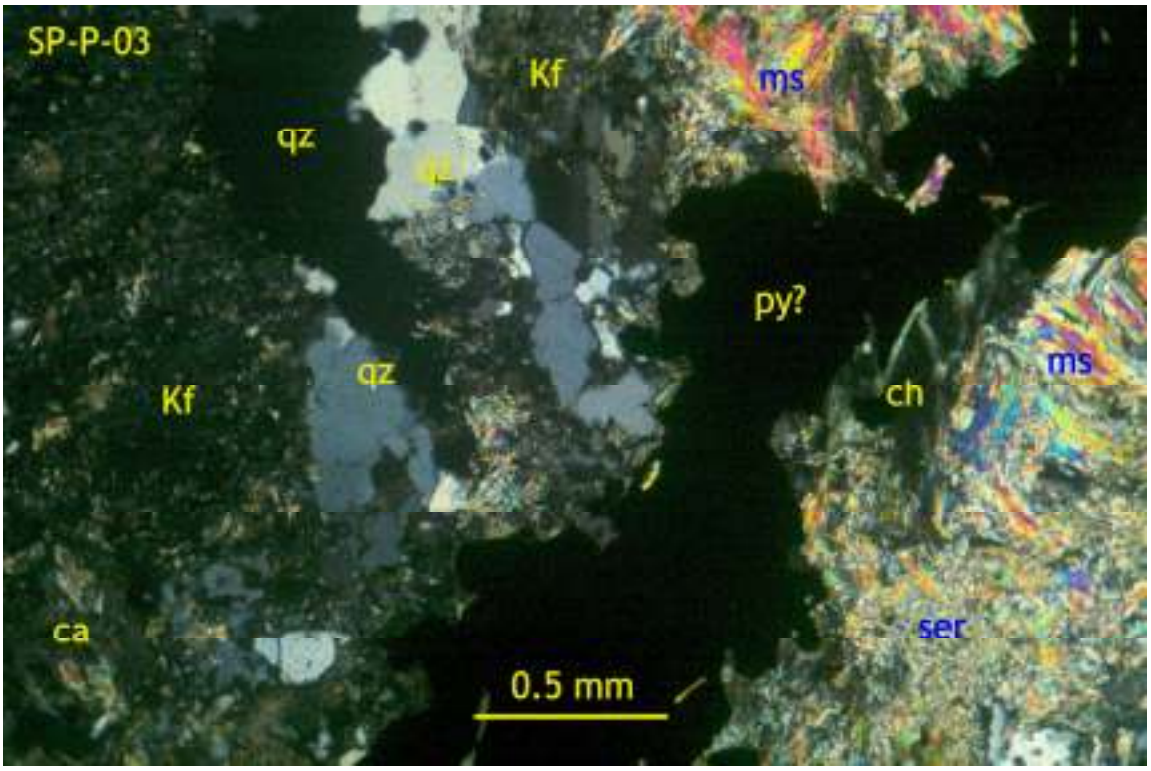
In summary, this is biotite-(relict unidentified mafic) granodiorite with accessory Fe-Ti oxide opaques and apatite, partly altered in a diffuse, paler-coloured zone to possible secondary Kspar ±quartz, clay?/sericite, chlorite and possible rutile.



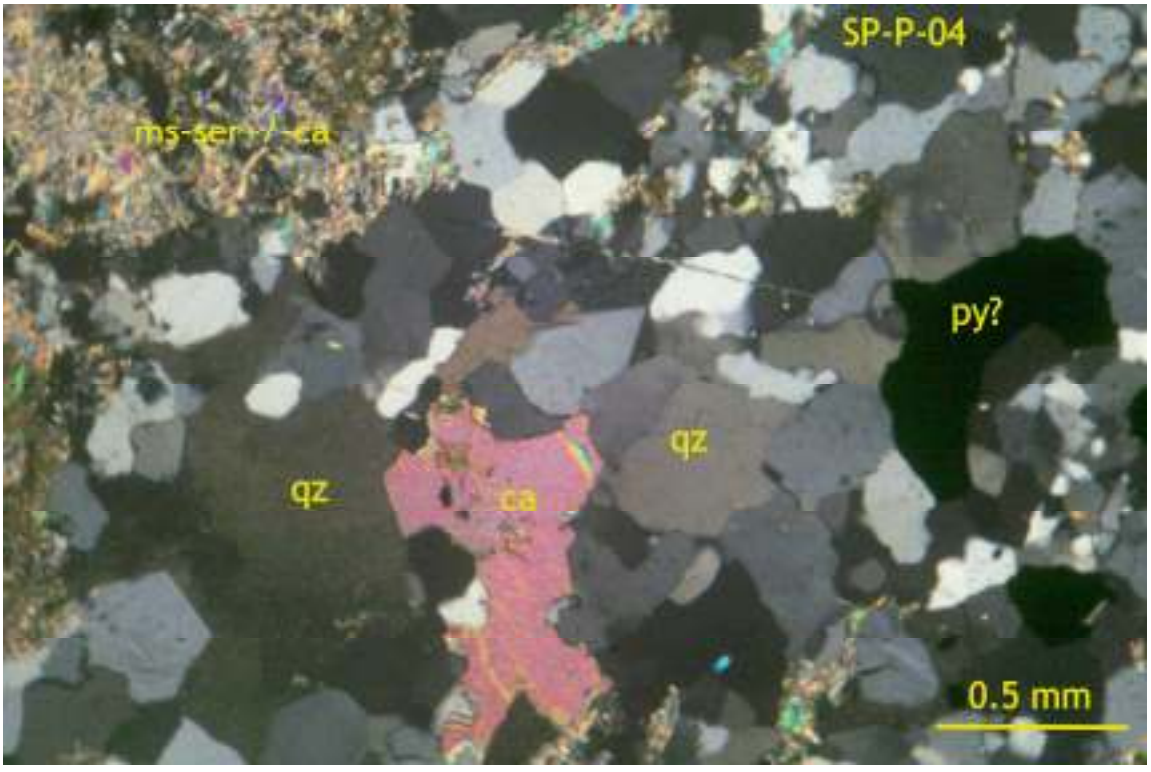
SP-P-01: granodiorite showing veinlets of carbonate (clear calcite, ca, brownish dolomite?), minor biotite (bi), apatite (ap) and opaques, associated with Kspar-minor quartz and weak sericite replacement of host plagioclase (pl) and quartz (qz). (The secondary Kspar is poorly defined; seen best in the stained offcut.) Transmitted plane light, field of view ~3 mm.



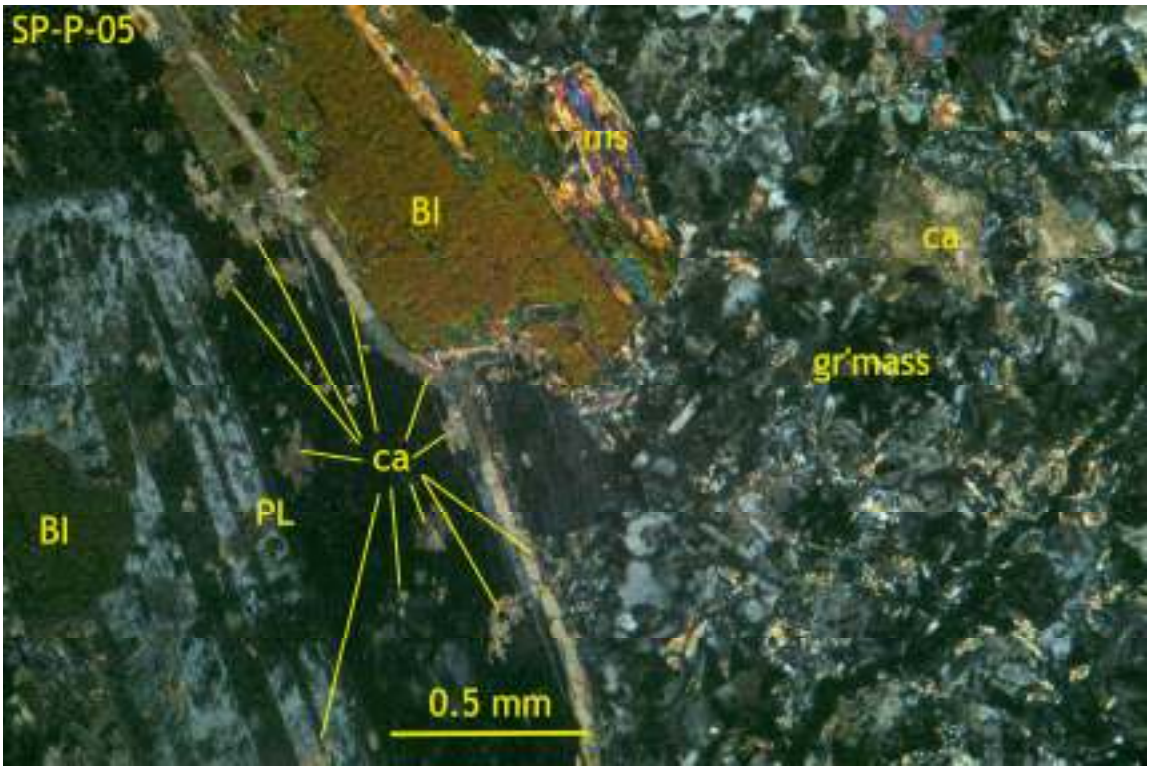
SP-P-02: porphyritic biotite granodiorite showing phenocrysts of zoned plagioclase (PL) and margin of possible mafic (M, mainly biotite/chlorite) in groundmass of plagioclase-quartz-biotite/chlorite-Kspar, apparently partly attacking margins of plagioclase crystals ("K-flooding"). Transmitted light, crossed polars, field of view ~3 mm wide.



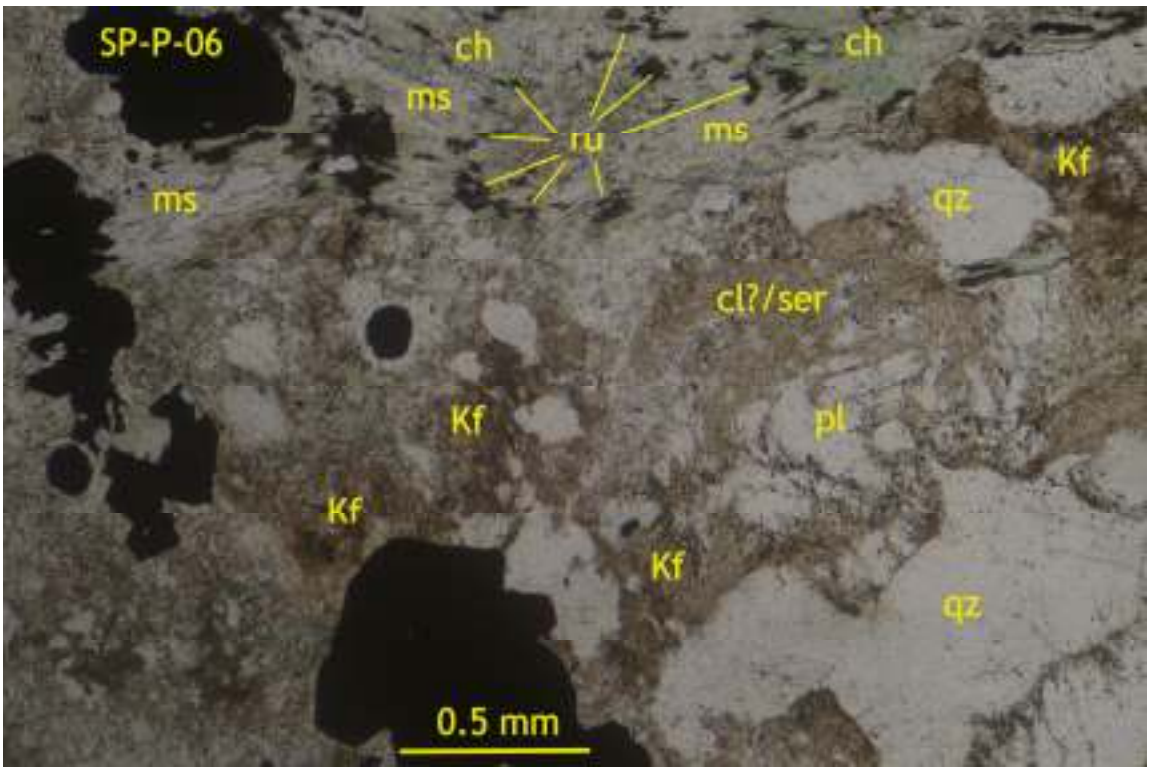
SP-P-03: poorly defined vein zone with central opaque (likely pyrite, py?) associated with muscovite (ms) or sericite (ser), chlorite (ch), secondary Kspar (Kf) replacing plagioclase, quartz (qz), and trace carbonate (cb). Transmitted light, crossed polars, field of view ~3 mm wide.



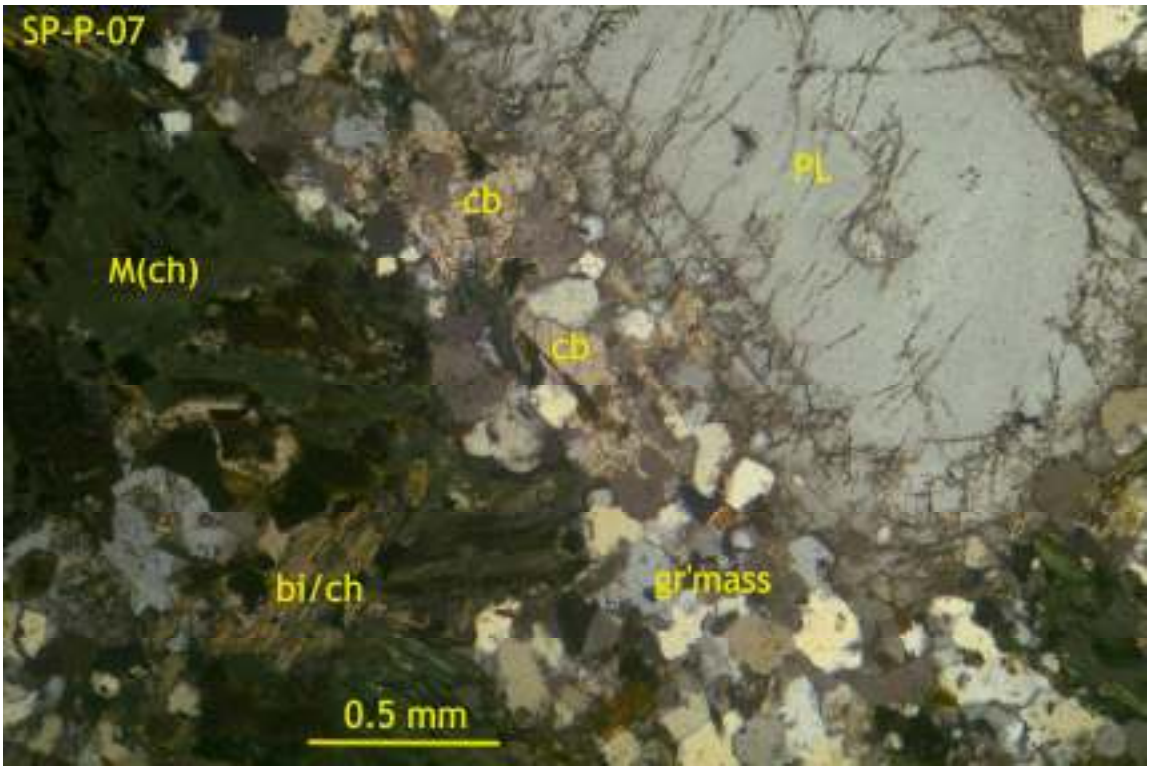
SP-P-04: intense phyllic (quartz-sericite/muscovite-minor carbonate) alteration envelope (upper left) to major quartz (qz)-carbonate (likely mainly calcite, ca)-local opaque (probably pyrite, py?) vein. Transmitted light, crossed polars, field of view ~3 mm wide.



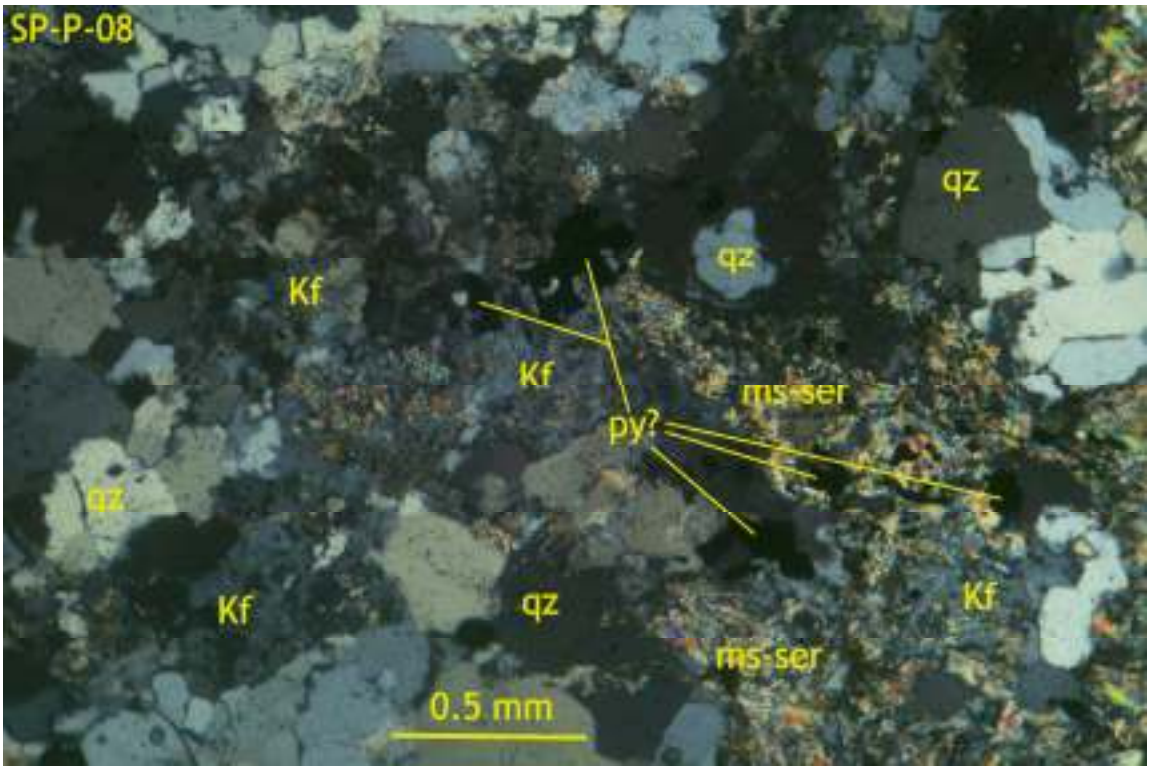
SP-P-05: biotite quartz latite porphyry showing phenocrysts of plagioclase (PL, altered to albite?-calcite) and biotite (BI, partly altered to muscovite, ms), in groundmass of Kspar-plagioclase-quartz partly altered to calcite (ca). Note thin veinlet of calcite. Transmitted light, crossed polars, field of view ~3 mm wide.



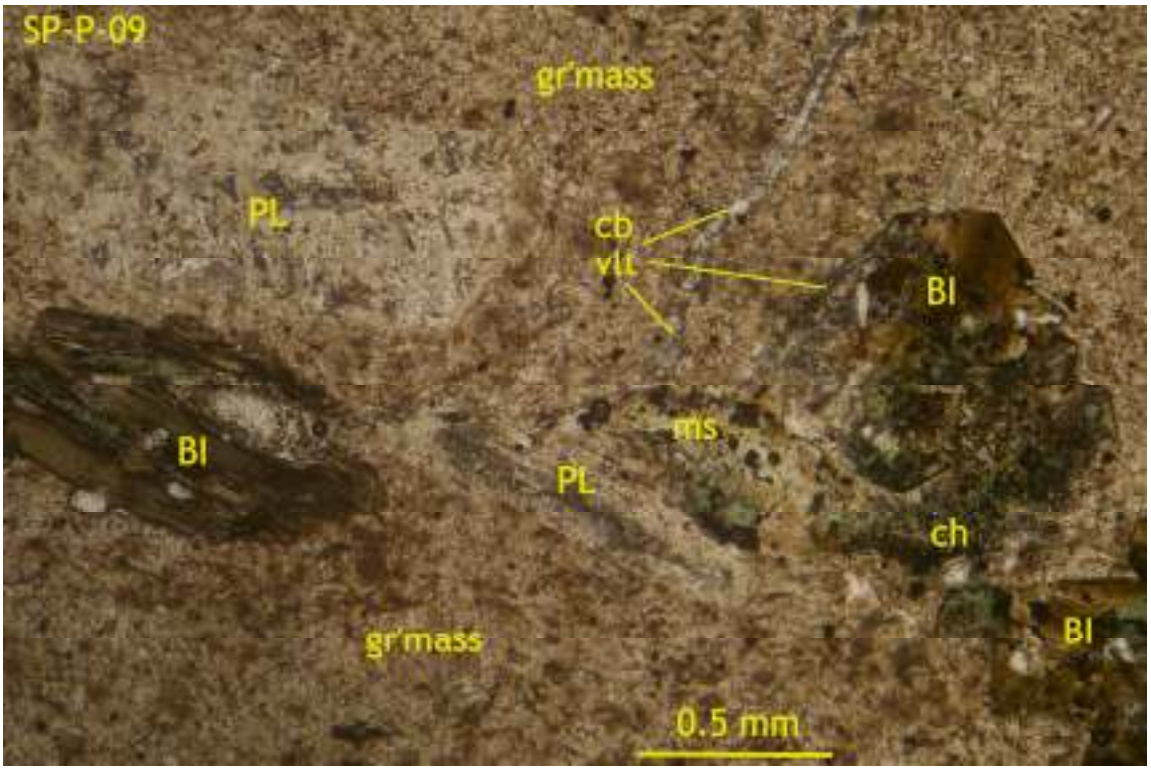
SP-P-06: alteration envelope along poorly defined quartz (qz)-sulfide (opaque) veinlet, in which plagioclase (pl) is partly clouded by/altered to clay?/sericite (cl?/ser) and/or brownish Kspar (Kf), biotite is replaced by very pale green chlorite (ch)-muscovite (ms) and accessory minute rutile. Transmitted plane light, field of view ~3 mm wide.



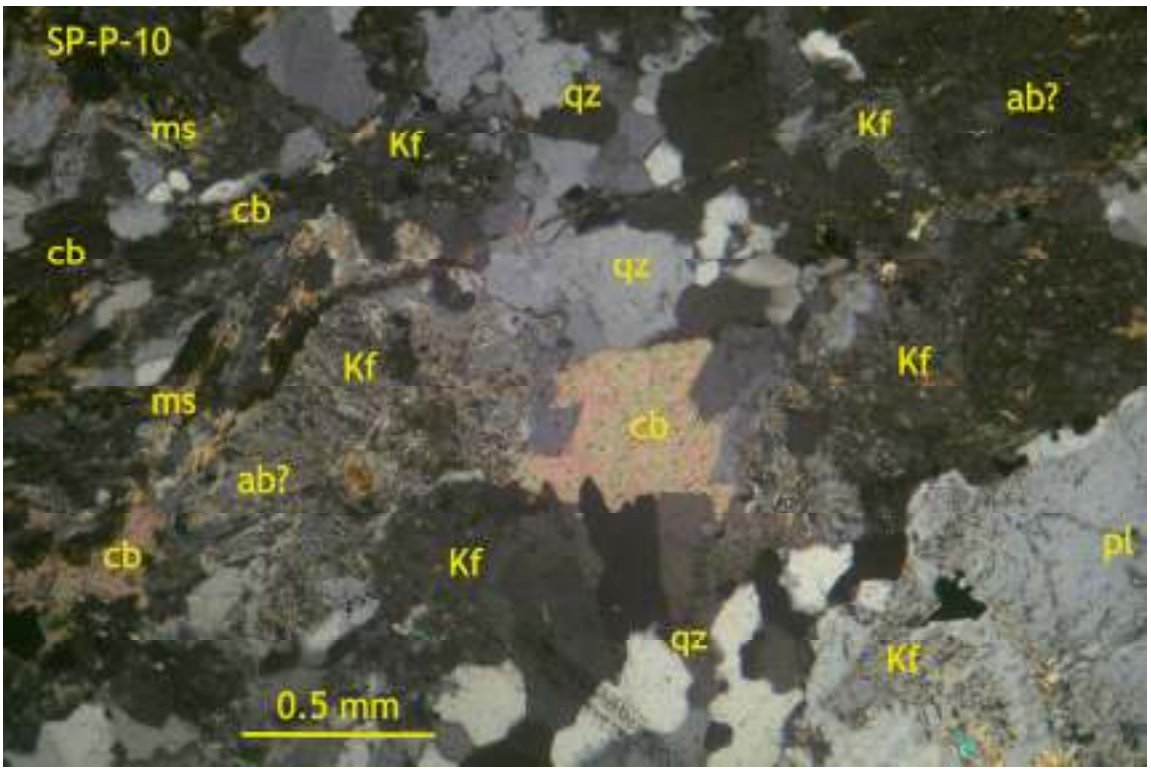
SP-P-07: porphyritic granodiorite composed of sub/euhedral plagioclase (PL) and relict mafic phenocrysts, the former partly altered to clay?/sericite especially near the rim, and the latter mostly composed of brown biotite replaced by green chlorite-trace rutile (opaque), in groundmass of plagioclase, quartz/minor Kspar (partly attacking margin of plagioclase, with local carbonate, cb). Transmitted light, partly uncrossed polars, field of view ~3 mm wide.



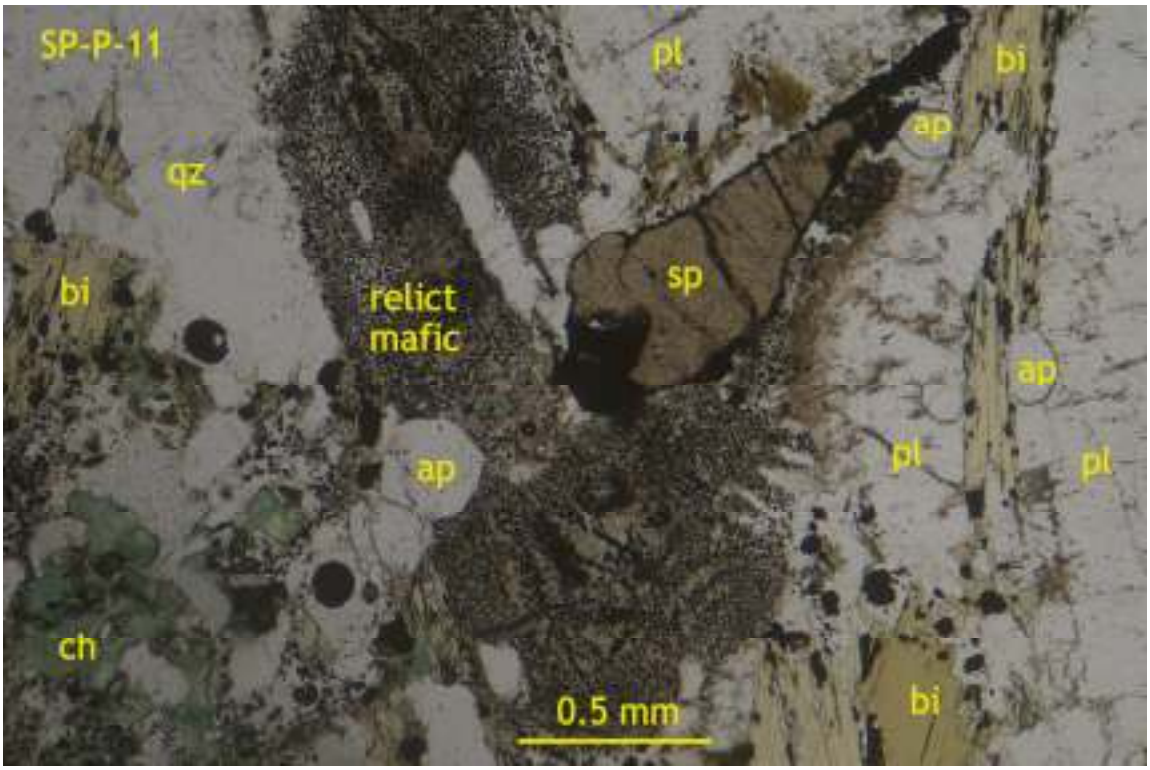
SP-P-08: section across diffuse veinlet showing fine-grained secondary Kspar (Kf), quartz (qz) and muscovite/sericite (ms-ser) that extends into immediate envelope, associated with minor sulfides (opaque, mainly pyrite?). Transmitted light, partly uncrossed polars, field of view ~3 mm wide.



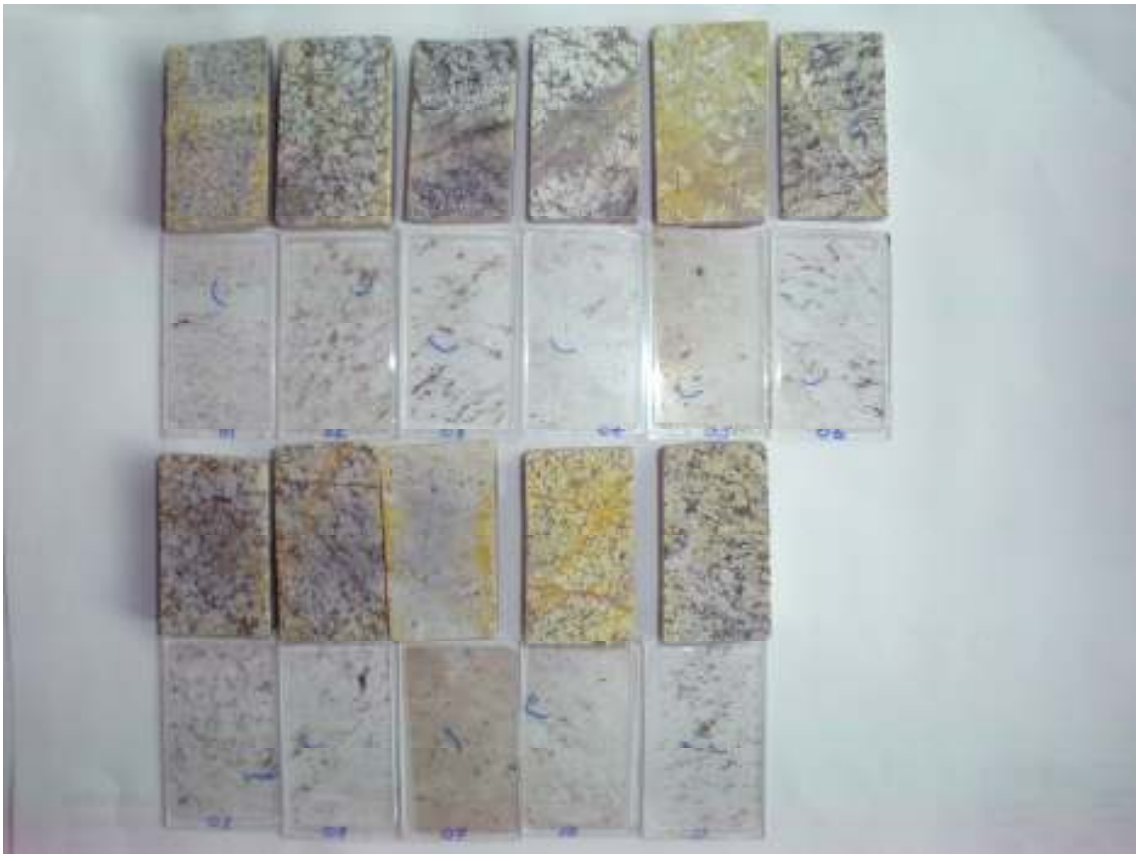
SP-P-09: biotite quartz latite porphyry showing relict phenocrysts of plagioclase (PL, altered to albite?-clay?/sericite-carbonate) and biotite (BI, partly altered to pale green chlorite, local muscovite), in groundmass of Kspar-plagioclase-quartz partly altered to carbonate (note thin veinlet of carbonate, cb). Transmitted plane light, field of view ~3 mm wide.



SP-P-10: potassic altered, phyllic overprinted granodiorite cut by N-S oriented, central thin irregular quartz (qz)-carbonate (cb) vein with envelopes/selvages of secondary Kspar (Kf) ± albite? (ab, after plagioclase, pl), local muscovite-carbonate (after biotite). Transmitted light, partly uncrossed polars, field of view ~3 mm wide.



SP-P-11: granodiorite composed of plagioclase (pl), quartz (qz), biotite (bi) partly altered to chlorite (ch), associated with opaque Fe-Ti oxides, sphene (sp), rounded apatite (ap), and subhedral elongate relict mafic site (pseudomorphed by very fine-grained clay?/chlorite-sericite-minute opaques). Transmitted plane light, field of view ~3 mm wide.



Overview of thin sections and offcuts (blue semi-circles mark photomicrograph locations).

Appendix V
Invoices

OUR NUMBER 719053

DATE MAY 9 4 2019

CUSTOMER'S ORDER

FROM GF CONTRACTING

ADDRESS BOX 2703 MERRITT BC
V1K 1B8
GST 892882374
CELL 250-378-1517
HOME 250-378-0801

SHIP TO PACIFIC RIDGE EXPLORATION

ADDRESS 1100-1111 MELVILLE STREET
VANCOUVER B.C.
V6E 3V6
Attn: Gerry Carlson
gcarlson@pacificridgeexploration.com

TAX REG. NO.	SALESPERSON	POB	TERMS	VIA

QUANTITY	DESCRIPTION	PRICE	AMOUNT
	SPIUS CREEK JOB		
MAY 14	HAUL HOE FROM MERRITT TO 25KM		450 00
	SPIUS, TRUCK TRAILER BACK TO MERRITT.		1260 00
	TRUCK TRAILER 3 HR.		1120 00
15	HAUL CULVERTS FROM SITE 3 ASPEN		560 00
	PLANERS, CLEAN BRUSH WERE NEEDED		700 00
	CLEAN SLIDE AND DITCH.		450 00
	HOE 9 HR.		
16	INSTALL CULVERT, CLEAN SLIDE AND DITCH		
	CLEAN BRUSH WERE NEEDED.		
	HOE 8 HR.		
17	CLEAN BRUSH FROM 30 KM TO BRIDGE SITE		
	WIDEN ROAD.		
	HOE 4 HR.		
20	HAUL BRIDGE FROM MERRITT TO 32 KM		
	BRIDGE SITE. INSTALL BRIDGE TRUCK TRAILER		
	BACK TO MERRITT.		
	HOE 5 HR. TRUCK TRAILER 3 HR.		4540 00
		GST	227 00
		TOTAL	4767 00

Blueline DC171

INVOICE

OUR NUMBER 719057

DATE June 19, 2019

CUSTOMER'S ORDER

FROM GF CONT

SOLD TO

ADDRESS BOX 2703
MERRITT B-C. V1K1B8
GST 892882374

SHIP TO PACIFIC RIDGE EXPLORATION

ADDRESS 1100-1111 MELVILLE STREET
VANCOUVER B-C.
V6E 3V6

TAX REG. NO.	SALESPERSON	FOB	TERMS	VIA

QUANTITY	DESCRIPTION	PRICE	AMOUNT
June 19	LOAD AND HAUL CORE FROM COLDWATER		600 00
	RANCH TO MERRITT. UNLOAD WITH TRACTOR		1120 0
	AT COVER ALL.		600 0
	DAY RATE 600.00 TRUCK AND TRAILER,		750 0
20	DUMP TRUCK TRAILER FROM MERRITT TO 25 KM		400 0
	SPIUS, HAUL HOE TO 34 KM SPIUS WALK HOE		
	TO DRILL PADS REHAB SITES, DEACTIVATE		
	ROAD. WALK HOE BACK TO 34 KM HAUL HOE TO		
	32 KM REMOVE BRIDGE AND HAUL BACK TO		
	MERRITT.		
	HOE 8 HR. TRUCK TRAILER. 4 HR.		
21	HAUL BRIDGE TO SITE 3 ASPEN PLANERS		
	UNLOAD BRIDGE TRUCK TRAILER BACK TO 32 KM		
	HAUL HOE BACK TO MERRITT.		
	TRUCK TRAILER 5 HR.		
	QUAD RENT $400.00		3470 0
		GST	173 5
		TOTAL	3643 5

INVOICE

Blueline DC171

OUR NUMBER 719054

DATE June 6, 2019

CUSTOMER'S ORDER

SOLD TO FROM GF CONT

ADDRESS BOX 2703 MERRITT BC
V1K1B8
GST 892883374

SHIP TO PACIFIC RIDGE EXPLORATION

ADDRESS 1100-1111 MELVILLE ST.
VANCOUVER B.C.
V6E3V6

TAX REG. NO.	SALESPERSON	FOB	TERMS	VIA

QUANTITY	DESCRIPTION	PRICE	AMOUNT
MAY 29	HAUL CULVERT 2-500 FROM SITE 3 ASPEN		700 00
	PLANERS TO 34 km SPILL & HAUL HOE FROM		600 00
	31.5 km TO 34 km BRUSH OUT TURN AROUND.		1120 00
	WALK HOE TO 37km START WORK ON OLD ROAD		1400 00
	HOE 5 HR. TRUCK TRAILER 4 HR.		1400 00
30	WORK ON REBUILDING OLD ROAD.		1400 00
	HOE 8 HR.		1400 00
31	WORK ON OLD ROAD INSTALL CULVERT		1400 00
	HOE 10 HR		1120 00
JUNE 1	WORK ON OLD ROAD INSTALL CULVERT		
	HOE 10 HR.		
2	WORK ON DRILL SITE AND BRUSHING		
	OUT ROAD TO DRILL SITES.		
	HOE 10 HR.		
3	HOE 10 HR.		
4	HOE 10 HR.		
5	FINISH WORK ON ROAD AND DRILL SITES WALK		10540 00
	HOE OUT TO 34 km		527 00
	HOE 8 HR.	TOTAL	11067 00

Blueline DC171

INVOICE

INVOICE

Fusion Timber Inc
Box 5015
Lac Le Jeune, British Columbia V1S1Y8
Canada

BILL TO
Pacific Ridge Explooration Ltd
Gerlad Carlson President
1100-111 Melville St
Vancouver , British Columbia BC
Canada

1-604-687-4951
gcarlson@pacificridgeexploration.com

Invoice Number: 398
Invoice Date: June 5, 2019
Payment Due: June 20, 2019
Amount Due (CAD): **$4,116.00**

Service	Quantity	Price	Amount
Slashing Brushing of overgrown road in Spius, as directed by Bruce Bried. 12 days two man crew, one day 2 man crew 2 hours to meet client on site, no charge for travel this day.	49	$80.00	$3,920.00

Subtotal:	$3,920.00
GST 5% (84172039RT0001):	$196.00
Total:	$4,116.00
Amount Due (CAD):	**$4,116.00**

Notes
Thank You for your business.

MSALABS
1-20120 102 AVE LANGLEY, BC V1M 4B4 Canada

INVOICE

A19-000491

INVOICE DATE
July 3, 2019
RECEIVED DATE
June 19, 2019
GST#
819010992

TO: Gerry Carlson

Pacific Ridge Exploration Ltd
Suite 1100, 1111 Melville Street
Vancouver, BC
V6E 3V6
Canada

JOB #	PROJECT NAME	PO#
YVR1910426	Spius_2019_Submission: #1	

QTY	CODE	DESCRIPTION	UNIT PRICE	AMOUNT
123	PWE-100	Received sample weight	$0.00	$0.00
6	PLG-100	Log Sample - No preparation required	$0.76	$4.56
117	PRP-910	Dry, crush 1kg to 2mm, split 250g & pulverize to 85% -75µm	$8.10	$947.70
482	PRP-950	Surcharge for samples >1kg, per kg	$0.78	$375.96
123	IMS-128	20g true aqua regia, ICP-ES/MS finish (39 elements)	$23.42	$2,880.66
117	DIS-100	Dispose or return handling of reject /per sample	$0.65	$76.05
123	DIS-200	Dispose or return handling of pulp /per sample	$0.20	$24.60
			SUBTOTAL	$4,309.53
			GST (5%)	$215.48
			TOTAL (CAD)	$4,525.01

COMMENTS:

*Please note that credit card payments will be subject to a 3.5% surcharge.

For payments in CAD funds

Beneficiary Customer
Beneficiary's Account Name:MSA Mineral Services Analytical (Canada) Inc.
Transit #: 00720
Institution #: 010
Account #: 7395213

Destination Bank
Destination Bank: CIBC
Destination bank address:
20069 64th Avenue
Langley, BC V2Y 1M9
Swift Code: CIBCCATT

Payable in full to MSA Mineral Services Analytical (Canada) Inc. Unit 1, 20120 102nd Avenue Langley, BC V1M 4B4

MSALABS
1-20120 102 AVE LANGLEY, BC V1M 4B4 Canada

INVOICE

A19-000504

INVOICE DATE
July 8, 2019
RECEIVED DATE
June 25, 2019
GST#
819010992

TO: Gerry Carlson

Pacific Ridge Exploration Ltd
Suite 1100, 1111 Melville Street
Vancouver, BC
V6E 3V6
Canada

JOB #		PROJECT NAME	PO#	
YVR1910440		Spius_2019_Submission: #2		
QTY	**CODE**	**DESCRIPTION**	**UNIT PRICE**	**AMOUNT**
71	PWE-100	Received sample weight	$0.00	$0.00
2	PLG-100	Log Sample - No preparation required	$0.76	$1.52
69	PRP-910	Dry, crush 1kg to 2mm, split 250g & pulverize to 85% -75µm	$8.10	$558.90
335	PRP-950	Surcharge for samples >1kg, per kg	$0.78	$261.30
71	IMS-128	20g true aqua regia, ICP-ES/MS finish (39 elements)	$23.42	$1,662.82
69	DIS-100	Dispose or return handling of reject /per sample	$0.65	$44.85
71	DIS-200	Dispose or return handling of pulp /per sample	$0.20	$14.20
			SUBTOTAL	$2,543.59
			GST (5%)	$127.18
			TOTAL (CAD)	$2,670.77

COMMENTS:

*Please note that credit card payments will be subject to a 3.5% surcharge.

For payments in CAD funds

Beneficiary Customer
Beneficiary's Account Name:MSA Mineral Services Analytical (Canada) Inc.
Transit #: 00720
Institution #: 010
Account #: 7395213

Destination Bank
Destination Bank: CIBC
Destination bank address:
20069 64th Avenue
Langley, BC V2Y 1M9
Swift Code: CIBCCATT

Payable in full to MSA Mineral Services Analytical (Canada) Inc. Unit 1, 20120 102nd Avenue Langley, BC V1M 4B4

MSALABS
1-20120 102 AVE LANGLEY, BC V1M 4B4 Canada

INVOICE

A19-000543

INVOICE DATE
July 23, 2019
RECEIVED DATE
July 2, 2019
GST#
819010992

TO: Gerry Carlson

Pacific Ridge Exploration Ltd
Suite 1100, 1111 Melville Street
Vancouver, BC
V6E 3V6
Canada

JOB #	PROJECT NAME	PO#
YVR1910457	Spius_2019_Submission: #3	

QTY	CODE	DESCRIPTION	UNIT PRICE	AMOUNT
183	PWE-100	Received sample weight	$0.00	$0.00
9	PLG-100	Log Sample - No preparation required	$0.76	$6.84
174	PRP-910	Dry, crush 1kg to 2mm, split 250g & pulverize to 85% -75µm	$8.10	$1,409.40
918	PRP-950	Surcharge for samples >1kg, per kg	$0.78	$716.04
183	IMS-128	20g true aqua regia, ICP-ES/MS finish (39 elements)	$23.42	$4,285.86
174	DIS-100	Dispose or return handling of reject /per sample	$0.65	$113.10
183	DIS-200	Dispose or return handling of pulp /per sample	$0.20	$36.60
			SUBTOTAL	$6,567.84
			GST (5%)	$328.39
			TOTAL (CAD)	$6,896.23

COMMENTS:

*Please note that credit card payments will be subject to a 3.5% surcharge.

For payments in CAD funds

Beneficiary Customer
Beneficiary's Account Name:MSA Mineral Services Analytical (Canada) Inc.
Transit #: 00720
Institution #: 010
Account #: 7395213

Destination Bank
Destination Bank: CIBC
Destination bank address:
20069 64th Avenue
Langley, BC V2Y 1M9
Swift Code: CIBCCATT

Payable in full to MSA Mineral Services Analytical (Canada) Inc. Unit 1, 20120 102nd Avenue Langley, BC V1M 4B4

DIAMOND CORE DRILLING

Paycore Enterprises Ltd.

INVOICE PR-1901

GST # 839103223 RT0001
PST # 1007-9529
Box 194
Valemount, B.C
V0E 2Z0
Phone: 250-968-4452

Date: June 24, 2019
Invoice period: June 2 - June 19, 2019
Payment term: Net 30

Bill To:
Pacific Ridge Exploration Ltd.
1100 - 1111 Melville St.
Vancouver, B.C
V6E 3V6

For: **Drilling Services on Spius Project 2019**

DESCRIPTION	AMOUNT
Drilling Charges	$ 102,669.00
Materials Used	$ 3,902.01
Additional Items	$ 38,999.81
SUBTOTAL	$ 145,570.82
TAX RATE	5.00%
GST	7,278.54
PST	273.14
TOTAL	
Security Deposit	
Total	$ 153,122.50

THANK YOU FOR YOUR BUSINESS!

PAYCORE ENTERPRISES LTD.

DIAMOND CORE DRILLING

Drilling Charges - from June 03 to June 19

Shown on Invoice PR-1901

Date	Day / Night	Hole	Size	Description	Meters from	Meters to	Total Meters	Total Hours	Rate	Total Metres X Rate	Total Hours X Rate
June 3 2019	D	SP-19-01	NQ	Overburden	0.00	6.00	6.00	2	$ 80.00	$ 480.00	$ -
June 3 2019	D	SP-19-01	NQ	Coring	6.00	11.00	5.00	2	$ 74.00	$ 370.00	$ -
June 3 2019	D	SP-19-01	NQ	Reaming				2	$ 160.00	$ -	$ 320.00
June 3 2019	D	SP-19-01	NQ	Waterline				1	$ 125.00	$ -	$ 125.00
June 3 2019	D	SP-19-01	NQ	Moves				2	$ 125.00	$ -	$ 250.00
June 3 2019	D	SP-19-01	NQ	Travel				2	$ 125.00	$ -	$ 250.00
June 3 2019	D	SP-19-01	NQ	Set up / Tear down				3	$ 125.00	$ -	$ 375.00
June 3 2019	N	SP-19-01	NQ	Coring	11.00	44.00	33.00	10	$ 74.00	$ 2,442.00	$ -
June 3 2019	N	SP-19-01	NQ	Tripping				1	$ 160.00	$ -	$ 160.00
June 3 2019	N	SP-19-01	NQ	Break down				1	$ -	$ -	$ -
June 3 2019	N	SP-19-01	NQ	Travel				2	$ 125.00	$ -	$ 250.00
June 4 2019	D	SP-19-01	NQ	Coring	44.00	98.00	54.00	11	$ 74.00	$ 3,996.00	$ -
June 4 2019	D	SP-19-01	NQ	Conditioning				1	$ 160.00	$ -	$ 160.00
June 4 2019	D	SP-19-01	NQ	Travel				2	$ 125.00	$ -	$ 250.00
June 4 2019	N	SP-19-01	NQ	Coring	98.00	134.00	36.00	11	$ 74.00	$ 2,664.00	$ -
June 4 2019	N	SP-19-01	NQ	Conditioning				1	$ 160.00	$ -	$ 160.00
June 4 2019	N	SP-19-01	NQ	Travel				2	$ 125.00	$ -	$ 250.00
June 5 2019	D	SP-19-01	NQ	Coring	134.00	150.00	16.00	4	$ 74.00	$ 1,184.00	$ -
June 5 2019	D	SP-19-01	NQ	Coring	150.00	173.00	23.00	5.5	$ 76.50	$ 1,759.50	$ -
June 5 2019	D	SP-19-01	NQ	Conditioning				1	$ 160.00	$ -	$ 160.00
June 5 2019	D	SP-19-01	NQ	Tripping				1.5	$ 160.00	$ -	$ 240.00
June 5 2019	D	SP-19-01	NQ	Travel				2	$ 125.00	$ -	$ 250.00
June 5 2019	N	SP-19-01	NQ	Coring	173.00	185.00	12.00	5	$ 76.50	$ 918.00	$ -
June 5 2019	N	SP-19-01	NQ	Travel				2	$ 125.00	$ -	$ 250.00
June 6 2019	D	SP-19-01	NQ	Coring	185.00	218.00	33.00	11	$ 76.50	$ 2,524.50	$ -
June 6 2019	D	SP-19-01	NQ	Conditioning				1	$ 160.00	$ -	$ 160.00
June 6 2019	D	SP-19-01	NQ	Travel				2	$ 125.00	$ -	$ 250.00
June 6 2019	N	SP-19-01	NQ	Coring	218.00	251.00	33.00	11	$ 76.50	$ 2,524.50	$ -
June 6 2019	N	SP-19-01	NQ	Conditioning				1	$ 160.00	$ -	$ 160.00
June 6 2019	N	SP-19-01	NQ	Travel				2	$ 125.00	$ -	$ 250.00
June 7 2019	D	SP-19-01	NQ	Coring	251.00	260.00	9.00	4	$ 76.50	$ 688.50	$ -
June 7 2019	D	SP-19-01	NQ	Tripping				1.5	$ 160.00	$ -	$ 240.00
June 7 2019	D	SP-19-01	NQ	Testing				0.5	$ 160.00	$ -	$ 80.00
June 7 2019	D	SP-19-01	NQ	Waterline				0.5	$ 125.00	$ -	$ 62.50
June 7 2019	D	SP-19-01	NQ	Moves				2.5	$ 125.00	$ -	$ 312.50
June 7 2019	D	SP-19-01	NQ	Travel				2	$ 125.00	$ -	$ 250.00
June 7 2019	D	SP-19-01	NQ	Set up / Tear down				3	$ 125.00	$ -	$ 375.00
June 7 2019	N	SP-19-02	NQ	Overburden	0.00	1.50	1.50	1	$ 80.00	$ 120.00	$ -
June 7 2019	N	SP-19-02	NQ	Coring	1.50	40.00	38.50	10	$ 74.00	$ 2,849.00	$ -
June 7 2019	N	SP-19-02	NQ	Tripping				1	$ 160.00	$ -	$ 160.00
June 7 2019	N	SP-19-02	NQ	Travel				2	$ 125.00	$ -	$ 250.00
June 8 2019	D	SP-19-02	NQ	Coring	40.00	94.00	54.00	11	$ 74.00	$ 3,996.00	$ -
June 8 2019	D	SP-19-02	NQ	Conditioning				1	$ 160.00	$ -	$ 160.00
June 8 2019	D	SP-19-02	NQ	Travel				2	$ 125.00	$ -	$ 250.00
June 8 2019	N	SP-19-02	NQ	Coring	94.00	130.00	36.00	11	$ 74.00	$ 2,664.00	$ -
June 8 2019	N	SP-19-02	NQ	Conditioning				1	$ 160.00	$ -	$ 160.00
June 8 2019	N	SP-19-02	NQ	Travel				2	$ 125.00	$ -	$ 250.00
June 9 2019	D	SP-19-02	NQ	Coring	130.00	150.00	20.00	5.5	$ 74.00	$ 1,480.00	$ -
June 9 2019	D	SP-19-02	NQ	Coring	150.00	163.00	13.00	4	$ 76.50	$ 994.50	$ -
June 9 2019	D	SP-19-02	NQ	Conditioning				1	$ 160.00	$ -	$ 160.00
June 9 2019	D	SP-19-02	NQ	Tripping				1.5	$ 160.00	$ -	$ 240.00
June 9 2019	D	SP-19-02	NQ	Travel				2	$ 125.00	$ -	$ 250.00
June 9 2019	N	SP-19-02	NQ	Coring	163.00	208.00	45.00	11	$ 76.50	$ 3,442.50	$ -
June 9 2019	N	SP-19-02	NQ	Conditioning				1	$ 160.00	$ -	$ 160.00
June 9 2019	N	SP-19-02	NQ	Travel				2	$ 125.00	$ -	$ 250.00
June 10 2019	D	SP-19-02	NQ	Coring	208.00	247.00	39.00	10	$ 76.50	$ 2,983.50	$ -
June 10 2019	D	SP-19-02	NQ	Conditioning				1	$ 160.00	$ -	$ 160.00
June 10 2019	D	SP-19-02	NQ	Repairing				1	$ -	$ -	$ -
June 10 2019	D	SP-19-02	NQ	Travel				2	$ 125.00	$ -	$ 250.00
June 10 2019	N	SP-19-02	NQ	Coring	247.00	283.00	36.00	11	$ 76.50	$ 2,754.00	$ -
June 10 2019	N	SP-19-02	NQ	Conditioning				1	$ 160.00	$ -	$ 160.00
June 10 2019	N	SP-19-02	NQ	Travel				2	$ 125.00	$ -	$ 250.00
June 11 2019	D	SP-19-02	NQ	Coring	283.00	285.00	2.00	0.5	$ 76.50	$ 153.00	$ -
June 11 2019	D	SP-19-03	NQ	Overburden	0.00	1.50	1.50	1	$ 80.00	$ 120.00	$ -
June 11 2019	D	SP-19-03	NQ	Coring	0.00	27.00	27.00	4.5	$ 74.00	$ 1,998.00	$ -
June 11 2019	D	SP-19-03	NQ	Anchoring				1	$ 160.00	$ -	$ 160.00
Sub Total Page One										**$ 43,105.50**	**$ 8,860.00**
Total Page One (meters and hours)											**$ 51,965.50**

PAYCORE ENTERPRISES LTD.
DIAMOND CORE DRILLING

Drill # D-01

Date	Day / Night	Hole	Size	Description	Meters from	Meters to	Total Meters	Total Hours	Rate	Total Metres X Rate	Total Hours X Rate
June 11 2019	D	SP-19-03	NQ	Tripping				1.5	$ 160.00	$ -	$ 240.00
June 11 2019	D	SP-19-03	NQ	Testing				0.5	$ 160.00	$ -	$ 80.00
June 11 2019	D	SP-19-03	NQ	Moves				1	$ 125.00	$ -	$ 125.00
June 11 2019	D	SP-19-03	NQ	Travel				2	$ 125.00	$ -	$ 250.00
June 11 2019	D	SP-19-03	NQ	Set up/ Tear down				2	$ 125.00	$ -	$ 250.00
June 11 2019	N	SP-19-03	NQ	Coring	27.00	63.00	36.00	11	$ 74.00	$ 2,664.00	$ -
June 11 2019	N	SP-19-03	NQ	Conditioning				1	$ 160.00	$ -	$ 160.00
June 11 2019	N	SP-19-03	NQ	Travel				2	$ 125.00	$ -	$ 250.00
June 12 2019	D	SP-19-03	NQ	Coring	63.00	102.00	39.00	9	$ 74.00	$ 2,886.00	$ -
June 12 2019	D	SP-19-03	NQ	Conditioning				1	$ 160.00	$ -	$ 160.00
June 12 2019	D	SP-19-03	NQ	Tripping				1	$ 160.00	$ -	$ 160.00
June 12 2019	D	SP-19-03	NQ	Reaming				1	$ 160.00	$ -	$ 160.00
June 12 2019	D	SP-19-03	NQ	Travel				2	$ 125.00	$ -	$ 250.00
June 12 2019	N	SP-19-03	NQ	Coring	102.00	150.00	48.00	10.5	$ 74.00	$ 3,552.00	$ -
June 12 2019	N	SP-19-03	NQ	Coring	150.00	153.00	3.00		$ 76.50	$ 229.50	$ -
June 12 2019	N	SP-19-03	NQ	Conditioning				1	$ 160.00	$ -	$ 160.00
June 12 2019	N	SP-19-03	NQ	Waterline				0.5	$ 125.00	$ -	$ 62.50
June 12 2019	N	SP-19-03	NQ	Travel				2	$ 125.00	$ -	$ 250.00
June 13 2019	D	SP-19-03	NQ	Coring	153.00	210.00	57.00	11	$ 76.50	$ 4,360.50	$ -
June 13 2019	D	SP-19-03	NQ	Conditioning				1	$ 160.00	$ -	$ 160.00
June 13 2019	D	SP-19-03	NQ	Travel				2	$ 125.00	$ -	$ 250.00
June 13 2019	N	SP-19-03	NQ	Coring	210.00	231.00	21.00	9	$ 76.50	$ 1,606.50	$ -
June 13 2019	N	SP-19-03	NQ	Tripping				2	$ 160.00	$ -	$ 320.00
June 13 2019	N	SP-19-03	NQ	Reaming				1	$ 160.00	$ -	$ 160.00
June 13 2019	N	SP-19-03	NQ	Travel				2	$ 125.00	$ -	$ 250.00
June 14 2019	D	SP-19-04	NQ	Overburden	0.00	6.00	6.00	3	$ 80.00	$ 480.00	$ -
June 14 2019	D	SP-19-04	NQ	Coring	6.00	8.00	2.00	1	$ 74.00	$ 148.00	$ -
June 14 2019	D	SP-19-04	NQ	Reaming				1	$ 160.00	$ -	$ 160.00
June 14 2019	D	SP-19-04	NQ	Waterline				2	$ 125.00	$ -	$ 250.00
June 14 2019	D	SP-19-04	NQ	Moves				1	$ 125.00	$ -	$ 125.00
June 14 2019	D	SP-19-04	NQ	Travel				2	$ 125.00	$ -	$ 250.00
June 14 2019	D	SP-19-04	NQ	Set up/ Tear down				4	$ 125.00	$ -	$ 500.00
June 14 2019	N	SP-19-04	NQ	Coring	8.00	56.00	48.00	11	$ 74.00	$ 3,552.00	$ -
June 14 2019	N	SP-19-04	NQ	Conditioning				1	$ 160.00	$ -	$ 160.00
June 14 2019	N	SP-19-04	NQ	Travel				2	$ 125.00	$ -	$ 250.00
June 15 2019	D	SP-19-04	NQ	Coring	56.00	107.00	51.00	11	$ 74.00	$ 3,774.00	$ -
June 15 2019	D	SP-19-04	NQ	Conditioning				1	$ 160.00	$ -	$ 160.00
June 15 2019	D	SP-19-04	NQ	Travel				2	$ 125.00	$ -	$ 250.00
June 15 2019	N	SP-19-04	NQ	Coring	107.00	150.00	43.00	11	$ 74.00	$ 3,182.00	$ -
June 15 2019	N	SP-19-04	NQ	Coring	150.00	152.00	2.00		$ 76.50	$ 153.00	$ -
June 15 2019	N	SP-19-04	NQ	Conditioning				1	$ 160.00	$ -	$ 160.00
June 15 2019	N	SP-19-04	NQ	Travel				2	$ 125.00	$ -	$ 250.00
June 16 2019	D	SP-19-04	NQ	Coring	152.00	182.00	30.00	9	$ 76.50	$ 2,295.00	$ -
June 16 2019	D	SP-19-04	NQ	Conditioning				1	$ 160.00	$ -	$ 160.00
June 16 2019	D	SP-19-04	NQ	Tripping				1	$ 160.00	$ -	$ 160.00
June 16 2019	D	SP-19-04	NQ	Reaming				1	$ 160.00	$ -	$ 160.00
June 16 2019	D	SP-19-04	NQ	Travel				2	$ 125.00	$ -	$ 250.00
June 16 2019	N	SP-19-04	NQ	Coring	182.00	209.00	27.00	9	$ 76.50	$ 2,065.50	$ -
June 16 2019	N	SP-19-04	NQ	Conditioning				1	$ 160.00	$ -	$ 160.00
June 16 2019	N	SP-19-04	NQ	Waterline				1	$ 125.00	$ -	$ 125.00
June 16 2019	N	SP-19-04	NQ	Travel				2	$ 125.00	$ -	$ 250.00
June 17 2019	D	SP-19-04	NQ	Coring	209.00	239.00	30.00	9	$ 76.50	$ 2,295.00	$ -
June 17 2019	D	SP-19-04	NQ	Conditioning				1	$ 160.00	$ -	$ 160.00
June 17 2019	D	SP-19-04	NQ	Repair				1	$ -	$ -	$ -
June 17 2019	D	SP-19-04	NQ	Waterline				1	$ 125.00	$ -	$ 125.00
June 17 2019	D	SP-19-04	NQ	Travel				2	$ 125.00	$ -	$ 250.00
June 17 2019	N	SP-19-04	NQ	Coring	239.00	266.00	27.00	9	$ 76.50	$ 2,065.50	$ -
June 17 2019	N	SP-19-04	NQ	Tripping				1	$ 160.00	$ -	$ 160.00
June 17 2019	N	SP-19-04	NQ	Testing				0.5	$ 160.00	$ -	$ 80.00
June 17 2019	N	SP-19-04	NQ	Waterline				0.5	$ 125.00	$ -	$ 62.50
June 17 2019	N	SP-19-04	NQ	Travel				2	$ 125.00	$ -	$ 250.00
June 17 2019	N	SP-19-04	NQ	Tear down				1	$ 125.00	$ -	$ 125.00
June 18 2019	D	SP-19-03	NQ	Coring	231.00	249.00	18.00	5.5	$ 76.50	$ 1,377.00	$ -
June 18 2019	D	SP-19-03	NQ	Conditioning				1	$ 160.00	$ -	$ 160.00
June 18 2019	D	SP-19-03	NQ	Reaming				2	$ 160.00	$ -	$ 320.00
June 18 2019	D	SP-19-03	NQ	Moves				1.5	$ 125.00	$ -	$ 187.50
June 18 2019	D	SP-19-03	NQ	Travel				2	$ 125.00	$ -	$ 250.00
Sub Total Page Two										**$ 36,685.50**	**$ 9,607.50**
Total Page Two (meters and hours)											**$ 46,293.00**

PAYCORE ENTERPRISES LTD.
DIAMOND CORE DRILLING

Date	Day / Night	Hole	Size	Description	Meters from	Meters to	Total Meters	Total Hours	Rate	Total Metres Rate X	Total Hours X Rate
June 18 2019	D	SP-19-03	NQ	Set up				2	$ 125.00	$ -	$ 250.00
June 18 2019	N	SP-19-03	NQ	Coring	249.00	276.00	27.00	11	$ 76.50	$ 2,065.50	$ -
June 18 2019	N	SP-19-03	NQ	Conditioning				1	$ 160.00	$ -	$ 160.00
June 18 2019	N	SP-19-03	NQ	Travel				2	$ 125.00	$ -	$ 250.00
June 19 2019	D	SP-19-03	NQ	Tripping				1.5	$ 160.00	$ -	$ 240.00
June 19 2019	D	SP-19-03	NQ	Testing				0.5	$ 160.00	$ -	$ 80.00
June 19 2019	D	SP-19-03	NQ	Cementing				1.5	$ 160.00	$ -	$ 240.00
June 19 2019	D	SP-19-03	NQ	Moves				3	$ 125.00	$ -	$ 375.00
June 19 2019	D	SP-19-03	NQ	Travel				2	$ 125.00	$ -	$ 250.00
June 19 2019	D	SP-19-03	NQ	Tear down				4	$ 125.00	$ -	$ 500.00
Sub Total Page Three										**$ 2,065.50**	**$ 2,345.00**
Total Page Three (meters and hours)											**$ 4,410.50**
Total Meters and Hours											**$ 102,669.00**

Paycore Enterprises Ltd
PO Box 194
Valemount, BC
V0E 2Z0
GST # 83910 3223
PST # 1007-9529

PAYCORE ENTERPRISES LTD.
DIAMOND CORE DRILLING

Material Used
Size: **NQ**

Company: **Pacific Ridge Exploration Ltd.**
Shown on Invoice PR-1901

Date	Hole	Day / Night	Description	Quantity	Rate	Total	
June 3 2019	SP-19-01	D	Casing 5'	4	$ 92.00	$ 368.00	
June 3 2019	SP-19-01	D	CR-650	1	$ 141.45	$ 141.45	*prorate
June 3 2019	SP-19-01	D	Casing shoe	1	$ 177.16	$ 177.16	
June 3 2019	SP-19-01	N	Bit Hero 7 - 1050523-01	1	$ 468.36	$ 355.95	
June 4 2019	SP-19-01	D	Core Spring	1	$ 9.49	$ 9.49	
June 6 2019	SP-19-01	N	CR-650	1	$ 141.45	$ 141.45	
June 7 2019	SP-19-02	N	Casing 5'	1	$ 92.00	$ 92.00	
June 8 2019	SP-19-02	N	Linseed oil	1	$ 101.20	$ 101.20	
June 9 2019	SP-19-02	D	Rod grease	1	$ 127.65	$ 127.65	
June 10 2019	SP-19-02	D	Core Spring	2	$ -	$ -	
June 11 2019	SP-19-02	D	NQ Rod	1	$ 138.00	$ 138.00	
June 11 2019	SP-19-02	D	Casing shoe	1	$ 177.16	$ 177.16	
June 11 2019	SP-19-03	D	Casing 5'	1	$ 92.00	$ 92.00	
June 11 2019	SP-19-03	D	Casing shoe	1	$ 177.16	$ 177.16	
June 12 2019	SP-19-03	N	Linseed oil	1	$ 101.20	$ 101.20	
June 13 2019	SP-19-03	N	Bit TX 9/11	1	$ 468.36	$ 468.36	
June 14 2019	SP-19-04	D	Casing 5'	4	$ 92.00	$ 368.00	
June 14 2019	SP-19-04	D	Casing shoe	1	$ 177.16	$ 177.16	
June 15 2019	SP-19-04	D	Linseed oil	1	$ 101.20	$ 101.20	
June 16 2019	SP-19-04	N	Linseed oil	1	$ 101.20	$ 101.20	
June 18 2019	SP-19-03	D	Core Spring	2	$ -	$ -	
June 18 2019	SP-19-03	D	Casing 2'	1	$ 62.10	$ 62.10	
June 19 2019	SP-19-03	D	Cement	4	$ 21.00	$ 84.00	
June 19 2019	SP-19-03	D	Van ruth plug	1	$ 340.12	$ 340.12	
June 19 2019	SP-19-03	D	Fence post	4	$ -	$ -	*additional item
Total Page One (Drill #1)						**$ 3,902.01**	

Paycore Enterprises Ltd.

Box 194
Valemount, BC V0E 2Z0
Phone 250-968-4452
GST # 83910 3223
PST # 1007-9529

DIAMOND CORE DRILLING

Additional Items

DATE: June 24, 2019

Shown on Invoice PR-1901

Bill To:
Pacific Ridge Exploration Ltd.
1100 - 1111 MelVille St.
Vancouver, B.C
V0E 2Z0

For: **Drilling Services on Spius Project 2019**

DESCRIPTION	AMOUNT
Mobilization of drill, support equipment and crew	$ 4,500.00
Foreman - June 2 to June 19 ($600/day * 17.5 days)	$ 10,500.00
Self-powered track mounted rod sloop - June 2 to June 19 ($200/day * 18 days)	$ 3,600.00
Food - 4 employees - June 2 to June 19	$ 2,315.57
325 core boxes at $14.31/box	$ 4,650.75
60 core box lids at $4.85/lid	$ 291.00
Kettle, Heater and Stapler - June 7 2019	$ 94.16
Muriatic Acid	$ 17.11
Ranger Fuel Tank Delivery - 1,000 gallons	$ 1,000.00
Fuel - Diesel	$ 1,786.56
Posts for collars	$ 24.61
Dyed diesel - 3500l	$ 4,126.50
MBI Reflex Instrument - June 2 to June 19 ($2,400/31 days * 18 days)	$ 1,393.55
Foreman's personal ATV - June 2 to June 19	$ 200.00
Demobilization of crew and equipment	$ 4,500.00
SUBTOTAL (Dollar Amount)	**$ 38,999.81**

THANK YOU FOR YOUR BUSINESS!

Ridgeline Exploration Services
335-1632 Dickson Avenue
Kelowna, BC, V1X 7T2
Canada
email: info@ridgelineexploration.com
www.RidgelineExploration.com

Invoice

Bill to: Pacific Ridge Exploration
Address: 1199 W. Hastings St.
Vancouver, BC. V6E 3T5
Canada

Project: Spius
Date: 10-04-2019
Invoice #: RID 20-009

Item	Rate	Quantity	AMOUNT
Field Work			$1,300.00
Transportation			$216.50

Cheques payable, and deliverable to:

Ridgeline Exploration Services Inc.

335-1632 Dickson Ave, Kelowna, BC.

THANK YOU FOR YOUR BUSINESS!

GST No. 810465799

SUBTOTAL	$1,516.50
GST 5%	$75.83
TOTAL	$1,592.33
PAYMENT	$0.00
BALANCE DUE	**$1,592.33**

PACIFIC RIDGE EXPLORATION - SPIUS PROJECT - 2019 SEPTEMBER - FIELD WORK CHARGES

FIELD WORK					
Personnel (Title)	**Dates**		**Days**	**Rate**	**Amount**
Chris Paul - Senior Geologist	September 26		0.5	$900	$ 450.00
Oliver Friesen - Senior Geologist	September 26		0.5	$700	$ 350.00
Matt Blanchard - Geotech	September 26		0.5	$500	$ 250.00
Curtis Woods - Geotech	September 26		0.5	$500	$ 250.00
	SUBTOTAL:		**2**		**$ 1,300.00**
TRANSPORTATION					
	Quantity	**Days**	**Km's**	**Rate**	**Amount**
4x4 Truck Rental	1	0.5		$0.00	$ -
Truck Mileage and Fuel Charge - Highway			40	$0.65	$ 26.00
Truck Mileage and Fuel Charge - Forest Service Roads			70	$1.65	$ 115.50
ATV Rental	1	1		$75.00	$ 75.00
	SUBTOTAL:				**$ 216.50**

TOTAL **$1,516.50**

Vancouver Petrographics Ltd.

8080 Glover Road
Langley BC
V1M 3S3
604-888-1323

Invoice

Date	Invoice #
9/13/2019	190379

Invoice To	Ship To
Pacific Ridge Exploration 1100-1199 West Hastings Vancouver, BC	Pacific Ridge Gerry Carlson

P.O. No.	Terms	Due Date	Ship Date	Ship Via
	Net 30	10/13/2019	9/18/2019	Canada Post

Description	Qty	U/M	Rate	Amount
Thin Sections (Standard) 27x46mm	11		25.00	275.00
Discount			-27.50	-27.50
Report by C.Leitch	11		225.00	2,475.00
Photos - Extra	1		25.00	25.00
Feldspar Stain - Regular	11		3.00	33.00
Shipping			30.00	30.00
GST On Sales			5.00%	140.53

Total	CAD 2,951.03
Payments/Credits	CAD 0.00
Balance Due	CAD 2,951.03

GST/HST No. 105484687 E-mail: vanpetro.invoices@gmail.com

INVOICE **2019- 101**

FROM: Bruce Bried, 6140 48A Avenue, Delta, BC V4K 1Y8

TO: Gerald G. (Gerry) Carlson, President
Pacific Ridge Exploration Ltd.
1100 – 1111 Melville Street
Vancouver, BC V6E 3V6

DATE	FIELD WORK	DAYS	RATE	SUBTOTAL
19-03-21	Drove from Ladner to snow at km 25 on the Spius road. Met with Grant Fosbery & looked at his TD8 dozer & CAT318 excavator. Called Clay Govett, AP contractor has chainsaw & brush saw crews, left message. Called Jim Harvey for old culverts, left message. Left message at Coldwater Indian Band about their JD180 excavator. Drove home.	1	$ 650.00	$ 650.00
19-04-08	Drove from Ladner to 40cm of snow at km 29 on Spius Road	0.5	$ 650.00	$ 325.00
19-04-10	Drove from Kamloops to Boston Bar & then up Stoyma road to km 9 hit 1 metre of snow	0.5	$ 650.00	$ 325.00
19-04-25	Drove from Ladner to snow at km 32.5 on Spius Road	0.5	$ 650.00	$ 325.00
19-05-01	Drove from Ladner to km 25 on Spius Road, met Clay from Aspen Planners drove up to snow at km 33.5, measured bridge at km 32.5, discussed program, I.e. using Grant Fosbery, Aspen Planners bridge.	1	$ 650.00	$ 650.00
19-05-11	Drove from Ladner to km 37 Spius, too much snow and mud to travel on Murray Mining Trail, brushed out road in a couple of spots and cut out numerous deadfalls, returned to Ladner.	1	$ 650.00	$ 650.00
19-05-17	Drove from Ladner to Spius km 37, walked into drill site with Grant Fosbery, Grant walked Excavator over bridge, too shaky, therefore need bridge to cover existing one, drove over to Boston Bar & up within 5 kms of Spius, drove home.	1	$ 650.00	$ 650.00
19-05-23	Drove from Ladner to km 37 of Spius, showed Prescott & Chris brush to be cut, flagged trail up to diamond drill hole #1 & 3, drove home.	1	$ 650.00	$ 650.00
19-05-26	Drove from Ladner to Port Kells, picked up Gerry, drove up to km 37, checked on Prescott & Laine, walked up to DDH #1 started brushing out drill trail to hole #2, drove back to Port Kells & home.	1	$ 650.00	$ 650.00
19-06-04	Drove from Ladner to Rustic cabin, picked up Gerry, drove up to km 37, took Grant's Quad up to almost DDH #2 brushed & flagged trail to DDH #3, located water for both holes, left quad for Grant, removed rocks & sticks from trail, drove home.	1	$ 650.00	$ 650.00
19-06-07	Drove from Ladner to Rustic Cabin, picked up Steve 7 drove up to km 37, walked to drill site, checked core, drove back to Rustic Cabin, helped Steve with core, bolted core splitter to clay pigeon table, cut & split firewood , swepted cabin.	1	$ 650.00	$ 650.00
19-06-08	Drove up to km 37 , cut path from #3 DDH up to small ponds directly above hole & then brushed out a rough trail to Chris Paul's HG float, built the sump up DDH #2 to prevent cuttings from overflowing, picked out more rocks and cut off small stumps sticking out of trail down to DDH #1, picked up & split some firewood, helped Steve with core, made dinner & washed dishes.	1	$ 650.00	$ 650.00
19-06-09	Helped Steve & split some core, washed dishes, swept kitchen, split some firewood.	1	$ 650.00	$ 650.00
	Field work sub-total	**11.5**		**$ 7,475.00**
	GST on Field work (BN 80199 7818 RT0001)			**$ 373.75**

DATE	TRAVEL	KMS	RATE	SUBTOTAL
19-03-21	Drove from Ladner, to Km 25 Spius road, Coldwater and return	500	$ 0.65	$ 325.00
19-04-08	Drove from Ladner to km 29 Spius road	250	$ 0.65	$ 162.50
19-04-10	Drove from Kamloops to Boston Bar & up to km 9	250	$ 0.65	$ 162.50
19-04-25	Drove from Ladner to snow at km 32.5 on Spius Road	250	$ 0.65	$ 162.50
19-05-01	Drove from Ladner to Spius return	500	$ 0.65	$ 325.00
19-05-11	Drove from Ladner to Spius return	550	$ 0.65	$ 357.50
19-05-17	Drove from Ladner to km 37 Spius, over to Boston Bar & home	600	$ 0.65	$ 390.00
19-05-23	Drove from Ladner to km 37 & return	600	$ 0.65	$ 390.00
19-05-26	Drove from Ladner to Port Kells, km 37, back to Port Kells & home.	625	$ 0.65	$ 406.25
19-06-04	Drove from Ladner to km 37 & return	600	$ 0.65	$ 390.00
19-06-07	Drove from Ladner to Rustic Cabin to km 37, to Rustic cabin.	300	$ 0.65	$ 195.00
19-06-08	Drove from Rustic Cabin to km 37 return.	70	$ 0.65	$ 45.50
	Travel sub-total	**5095**		**$ 3,311.75**

Total			**$ 11,160.50**

Appendix VI
Miscellaneous Field Expenses

Spius Project - Miscellaneous Field Expenditures

Date	Description	Total
8-May-19	A & H RV - Trailer Deposit	$ 750.00
25-May-19	Dick's - Tools for camp	$ 692.33
26-May-19	CDN Labs - Standards	$ 321.31
29-May-19	Deakin - Field Supplies	$ 1,538.14
29-May-19	Canadian - Truck Rental	$ 2,000.00
29-May-19	Norquip - Hand held radios	$ 1,254.00
29-May-19	Canadian Tire - Field Supplies	$ 156.96
30-May-19	Deakin - Sat phone	$ 685.90
31-May-19	Walmart - Field Supplies	$ 222.02
31-May-19	Cdn Tire - Field Supplies	$ 645.88
31-May-19	Lunch	$ 12.97
31-May-19	Fuel	$ 100.00
31-May-19	Fuel	$ 30.40
31-May-19	Groceries	$ 229.94
31-May-19	Fields - Field supplies	$ 71.96
1-Jun-19	Pharmacy - Epi pen	$ 105.64
1-Jun-19	Groceries	$ 323.00
1-Jun-19	Walmart - Field Supplies	$ 255.00
2-Jun-19	Walmart - Field Supplies	$ 113.09
2-Jun-19	Groceries	$ 162.98
4-Jun-19	Fuel	$ 188.53
4-Jun-19	Home Hdwre - Field Supplies	$ 414.91
4-Jun-19	Nicola Chainsaw - Field Supplies	$ 153.01
4-Jun-19	Cdn Tire - Field Supplies	$ 241.44
4-Jun-19	Save-On - Groceries	$ 170.19
10-Jun-19	Deakin - Field Supplies	$ 316.12
10-Jun-19	Fuel	$ 127.30
10-Jun-19	Groceries	$ 95.49
11-Jun-19	Fuel	$ 50.49
11-Jun-19	Home Hdwre - Field Supplies	$ 176.28
11-Jun-19	Nicola - Generator repair	$ 67.54
11-Jun-19	Groceries	$ 283.98
14-Jun-19	Fuel	$ 110.65
14-Jun-19	Fuel	$ 23.09
14-Jun-19	Source - Field Supplies	$ 67.18
14-Jun-19	Purity - Field Supplies	$ 299.07
14-Jun-19	Groceries	$ 56.48
14-Jun-19	Groceries	$ 468.83
14-Jun-19	Groceries	$ 55.88
15-Jun-19	Cdn Tire - Crush stone	$ 20.14
18-Jun-19	Groceries	$ 62.02
18-Jun-19	Hardware	$ 33.01
18-Jun-19	Pharmasave	$ 27.28
18-Jun-19	Groceries	$ 34.38

18-Jun-19	Local Butcher	$	97.21
19-Jun-19	Lunch	$	4.71
20-Jun-19	Board Lunch	$	359.29
23-Jun-19	Dinner - Steve & Cody	$	84.36
24-Jun-19	Truck Rental	$	1,591.66
24-Jun-19	Breakfast	$	22.50
24-Jun-19	Hotel	$	73.45
24-Jun-19	Fuel	$	161.33
8-Jul-19	Diamond Delivery	$	379.24
	TOTAL	**$**	**15,988.56**