



Ministry of Energy, Mines & Petroleum Resources  
Mining & Minerals Division  
BC Geological Survey

Assessment Report  
Title Page and Summary

TYPE OF REPORT [type of survey(s)]: Drilling

TOTAL COST: 285,194.91

AUTHOR(S): Jillian Christmann

SIGNATURE(S): 

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S): MX6-3

YEAR OF WORK: 2019

STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE(S): 5805585

PROPERTY NAME: Bull River

CLAIM NAME(S) (on which the work was done): 1048930, 1048988

COMMODITIES SOUGHT: Cu, Ag, Au

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN: 082GSW054, 082GSW018

MINING DIVISION: Fort Steele

NTS/BCGS: 082G/06; 082G/11

LATITUDE: 49 ° 22 ' " "

LONGITUDE: 115 ° 11 ' " "

(at centre of work)

OWNER(S):

1) Braveheart Resources Inc

2)

MAILING ADDRESS:

2520 - 16 Street NW

Calgary, Alberta T2M 3R

OPERATOR(S) [who paid for the work]:

1) Braveheart Resources Inc.

2)

MAILING ADDRESS:

2520 -16 St NW

Calgary, Alberta T2M 3RZ

PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude):

Dalton Mine, Aldridge, Proterozoic, Purcell Supergroup, Cedar, G-Zone, Rex, Dean, Galena, Chalcopryrite, Pyrite, Pyrrhotite,

Quartz, Siderite

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS:

18368, 36585, 37195, 37660, 37983

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
<b>GEOLOGICAL (scale, area)</b>			
Ground, mapping	_____	_____	_____
Photo interpretation	_____	_____	_____
<b>GEOPHYSICAL (line-kilometres)</b>			
<b>Ground</b>			
Magnetic	_____	_____	_____
Electromagnetic	_____	_____	_____
Induced Polarization	_____	_____	_____
Radiometric	_____	_____	_____
Seismic	_____	_____	_____
Other	_____	_____	_____
<b>Airborne</b>			
_____	_____	_____	_____
<b>GEOCHEMICAL (number of samples analysed for...)</b>			
Soil	_____	_____	_____
Silt	_____	_____	_____
Rock	_____	_____	_____
Other	_____	_____	_____
<b>DRILLING (total metres; number of holes, size)</b>			
Core	1697.35; 11; NQ2	1048930, 1048988	285,194.91
Non-core	_____	_____	_____
<b>RELATED TECHNICAL</b>			
Sampling/assaying	_____	_____	_____
Petrographic	_____	_____	_____
Mineralographic	_____	_____	_____
Metallurgic	_____	_____	_____
<b>PROSPECTING (scale, area)</b>			
_____	_____	_____	_____
<b>PREPARATORY / PHYSICAL</b>			
Line/grid (kilometres)	_____	_____	_____
Topographic/Photogrammetric (scale, area)	_____	_____	_____
Legal surveys (scale, area)	_____	_____	_____
Road, local access (kilometres)/trail	_____	_____	_____
Trench (metres)	_____	_____	_____
Underground dev. (metres)	_____	_____	_____
Other	_____	_____	_____
<b>TOTAL COST:</b>			285,194.91

# Technical Report for the Bull River Mine Property

## Rex and G Zone Claims Report

Latitude 49° 22'N, Longitude 115° 11'W

Mapsheets 82G/11 and 82G/06

Ft. Steele Mining Division

Prepared on behalf of:

Braveheart Resources Inc.

2520 – 16 St. NW

Calgary, Alberta, Canada

T2M 3R2

Prepared by:

Jillian Christmann

Box 845

Cranbrook, British Columbia, Canada

V1C 4J6

June 15, 2020

## Summary

Braveheart Resources Inc., (“Braveheart”) holds 100% ownership of the Bull River Mine Property (the “Property”). The Property is located approximately 30.0 km east of the city of Cranbrook and 30.0 km north of the town of Elko along the eastern flank of the Rocky Mountain Trench at the base of the Hughes and Lizard Ranges in southeastern British Columbia. The Ft. Steele-Wardner road, Bull River road, along with subsidiary gravel roads and Forest Service Roads (FSR) provide access to a large portion of the Property including the mill site, the past producing mine, the Deposit, and numerous other prospective mineral occurrences.

Ross Stanfield purchased the assets of the Dalton Mine from Placid on March 5th, 1976 and transferred the assets to Bull River under incorporation on March 17th, 1976. In January 2019, all of the mining properties were transferred and are now owned 100% by Braveheart Resources Inc (<http://www.braveheartresourcesinc.com/>)

The Property currently includes 25 contiguous MTO Mineral Claims with a total area of 10,374 ha in the Ft. Steele Mining Division.

The Property is located within the Belt-Purcell Basin, a Meso-Proterozoic intracontinental rift filled by marine and fluvial sediments that comprise the Belt-Purcell Supergroup. Approximately 10% of the exposed area of Belt-Purcell Basin can be found in Canada, where it is referred to as the Purcell Basin and Purcell Supergroup (Lydon, 2007). The Belt-Purcell Basin is flanked by Upper Proterozoic Windermere Group or Paleozoic sedimentary rocks (Höy et al., 2000). The Aldridge Formation defines the base of the Purcell Supergroup. Within an approximate 30.0 km radius of Cranbrook, British Columbia, the Aldridge Formation also hosts the world class Sullivan deposit as well as the Estella, Kootenay King, and St. Eugene mineral deposits (Allen, 1989).

The Property, and more specifically the past producing mine and many of the numerous mineral occurrences, are underlain by the Purcell Supergroup, a thick sequence of terrigenous clastic, carbonate and minor volcanic rocks of Middle Proterozoic age (Höy, 1993). The Aldridge Formation is characterized by thick successions of graded sandy turbidites and interbedded laminated siltstones and argillites. The turbidites are intruded by the dioritic to gabbroic Moyie sills and dykes. To the east, the Upper Aldridge

rocks, composed of argillites and siltites, overlie the turbidites. Mineralization hosted within Aldridge Formation metasedimentary rocks is typically observed as fine-grained pyrite and pyrrhotite, up to several percent, that oxidizes when exposed on surface (Höy et al., 2000). Further east, the Creston Formation is exposed. Creston Formation rocks comprise a shallow water platform and fan-delta succession of predominantly quartzites and siltites. South of the Bull River, Creston Formation rocks are overlain by Kitchener Formation carbonate rocks. Cretaceous monzonite-dacite stocks, plugs and dikes intrude Purcell Supergroup rocks and younger Paleozoic shallow water sediments (Höy et al., 2000). The southernmost claim group where the work was completed in 2016 is underlain by Precambrian Gateway Formation comprised of siltstone and dolomitic siltstone south of the Hosmer Thrust Fault and is juxtaposed against Paleozoic rocks of the Rundle Formation (Graf,2014).

From July 20<sup>th</sup> until August 14<sup>th</sup>, 2019, drilling activities were completed on Braveheart Resources Inc. mineral claims 1048930 and 1048988, in exploration areas referred to in this report as the G Zone and Rex Zone.

Total expenditures on the project described in this report were \$285,194.91

The goal and scope of the 2019 exploration drill program are outlined below and have been described upon the area of the property worked:

- G Zone

The goal of the G Zone diamond drill program was to evaluate the economical potential of a historically reported, structurally controlled massive sulphide lense, consisting of strained galena and some sphalerite. It is hosted by Aldridge Formation metasediments including argillites and siltites. This lense was explored by a drift in the past, however detailed mapping of the lense does not exist and the exploration drift is not accessible at this time.

Between July 20<sup>th</sup> and July 30<sup>th</sup>, 2019, six (6) NQ2 sized holes were drilled by on the upper G Zone, on 2 separate drill pads, by Lucky Drilling Ltd. The drill Total meterage for the program was 501.02m, from which 65 samples of halved core were collected and sent for analysis to Bureau Veritas Mineral Laboratories, located in Vancouver, B.C.

Only one hole (GZ-19-04) definitively intersected the target structure. The zone was intersected at 33.4m downhole for approximately 10 cm. Vein contacts were not discernible due to rubble. The vein consisted of solid sulphide, mostly galena with some brown sphalerite and minor pyrite.

The galena had the appearance of 'steel' galena (which is usually an indicator of high silver content). A detailed table of drill results is in the 2019 Exploration Results section of this report. Despite intersecting the targeted structure in hole GZ-19-04, the results could not be duplicated in the other drillholes and a definitive orientation of the structure could not be determined, indicating that the structure may be presented in discontinuous pods, rather than a continuous structure.

Additional work recommended to advance the G Zone are listed below, and are not limited to:

- Detailed research and compilation of all existing historic data from the property resulting in a comprehensive database which future exploration programs can be designed and implemented as budget allows.
  - Detailed field mapping of area around the G Zone adit to attempt to delineate any alteration package associated with the structure.
  - An examination, including sampling and detailed mapping of the exposed vein in the "Lower G Zone" adit to help determine orientation of deposits similar to the "Upper G Zone" in the area.
  - Opening of the G Zone adit for a program of sampling and mapping any visible mineralized structure.
- 
- Rex Zone

The goal of the 2019 Rex Zone drill program was designed to further evaluate the economical potential of the vein system, which had previously been explored in 2018 by geochemical, geological, and geophysical surveys.

The 'REX' zone is a network of siderite-qtz-pyrrhotite-pyrite +/- chalcopyrite veins and quartz-pyrrhotite-chalcopyrite veins, well-exposed in an existing gravel pit. The veins are known to carry important values in copper with minor silver and unimportant gold.

Between August 3<sup>rd</sup> and 14<sup>th</sup>, the company drilled a total of five (5) NQ2 sized holes on the Rex Zone structure for a total of 1196.33 metres, from which 86 samples of halved core were collected and sent for analysis to Bureau Veritas Mineral Laboratories, located in Vancouver, B.C..

Due to permitting restrictions initial holes were drilled in less than optimal locations, quite distant from known showings. Despite this, several holes intersected significant core lengths of strong siderite-quartz-pyrrhotite veining with minor chalcopyrite. Veining exists principally as sheeted

veins and some stockwork. Pyrrhotite is the dominant species with subordinate pyrite and minor chalcopyrite. The vein zones are accompanied by sericite +/- chlorite alteration. Thus, vein zones represent both a structural and hydrothermal corridor. Despite intersecting significant zones of mineralized structure, the drilling did not produce any economical grades. A detailed table of drill results is in the 2019 Exploration Results section of this report.

Overall, the Rex Zone is regarded as a prospective exploration target, and given its proximity to other copper-silver-gold bearing vein systems such as the Empire located approximately 3.0 km along strike of the vein system to the east there appears to be opportunity to discover additional zones of mineralization. Future work is recommended for the area given the remarkable similarities that these vein systems have with the Bull River Mine geology.

Additional work recommended to advance the Rex Zone are listed below, and are not limited to:

- A follow up drill program with a drill pad location in closer proximity to the quarry, which was mapped and sampled in the 2018 field program and a drill pad in closer proximity to the small shaft that was also sampled in the 2018 field program.
- Additional drilling to the east and west of the quarry, targeting geophysical targets identified in the 2018 field program, which are along strike of the above-mentioned Empire vein system.

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## Introduction

### Location and Access

The Property is located approximately 30.0 km east of the city of Cranbrook and 30.0 km north of the town of Elko (Figure 1) in the Regional District of East Kootenay. Access to the Property from Cranbrook is gained by travelling on Highway 3 for approximately 35.0 km, then left onto the Ft. Steele-Wardner Road for approximately 8.0 km, then right onto the Bull River Road for approximately 6.0 km. The company office, mill site and historic mine workings can be accessed at this location.

In 2019, fieldwork was completed by staff from Braveheart, Drill company Lucky Drilling, and another independent geoscience professional on the Rex and G Zone Mineral Claims #1048930 and 1048988. The fieldwork consisted of drilling a 5 NQ2 sized drillholes on the Rex zone and 6 NQ2 sized drillholes on the G Zone (Figure 2).

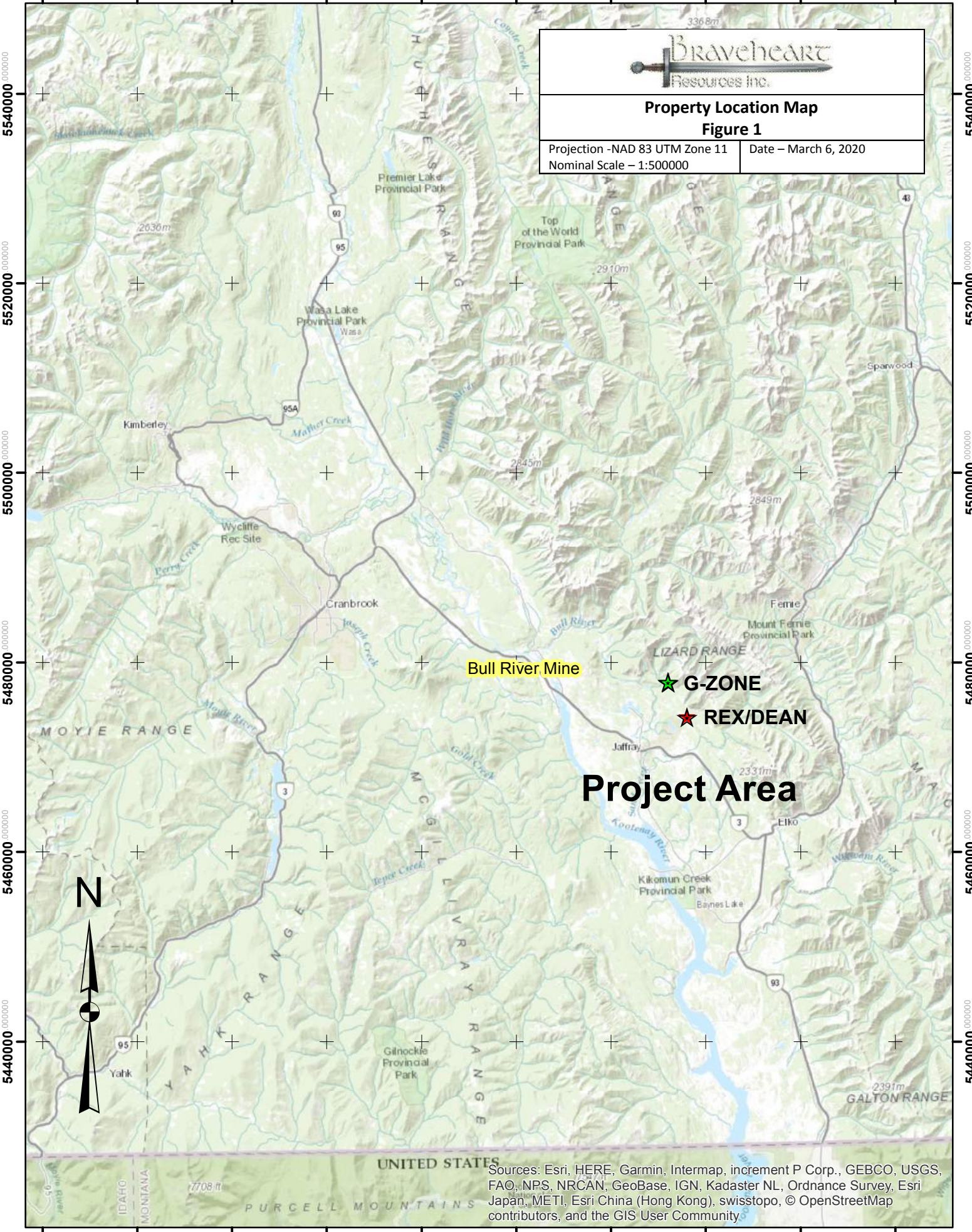
The Property is located in NTS mapsheets 082G/06, and 082G/11, and its core assets are centred at approximately at Latitude  $49^{\circ} 30'N$ , Longitude  $-115^{\circ} 23'W$ .


The Property lies within the Rocky Mountain Trench at the base of the Hughes Range in southeastern British Columbia. Topography varies significantly and is characterized by gently rolling and subdued topography in the trench to steep, rugged mountain terrain in the Hughes Range. Outcrop is sparse in the valley bottom where Quaternary cover can exceed 200.0 m depth (Dzick and Ghaymghamian, 2013), and exposure increases with elevation to near continuous coverage along mountain tops. Elevations range from approximately 790.0 m to 2,641.0 m above sea level. The Bull River, Sand Creek and related tributaries are the main perennial watercourses draining the property all of which flow into the Kootenay River. Water in the creeks and streams is readily available most of the year.

The property is located within the Interior Douglas Fir and Ponderosa Pine biogeoclimatic zones (British Columbia Ministry of Forests Research Branch). The weather is typical of the Hughes Range, with moderate to dry summers and heavy snowfall at high elevations in the winter. Most of the property (low elevation) is free from snow beginning in April until November, and the road infrastructure allows for year-round drilling operations at lower elevation work sites. The terrain is characterized by open pasture and mature vegetation that is used as forage for domestic cattle, elk, big horn sheep, white tail and mule deer, and grizzly and black bears (Dzick and Ghaymghamian, 2013).

The Property is entirely within the traditional territory of the Ktunaxa First Nation.

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 <b>Braveheart Resources Inc.</b>	
<b>Property Location Map</b> <b>Figure 1</b>	
Projection -NAD 83 UTM Zone 11 Nominal Scale – 1:500000	Date – March 6, 2020



# Project Area

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community


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 <b>Braveheart Resources Inc.</b>	
<b>Drill Site Locations – REX/DEAN</b> <b>Figure 2</b>	
Projection -NAD 83 UTM Zone 11	Date – March 6, 2020
Nominal Scale – 1:10000	



**Legend**

-  REX Drill Sites
-  Minfile Occurrences
-  Mineral Claims



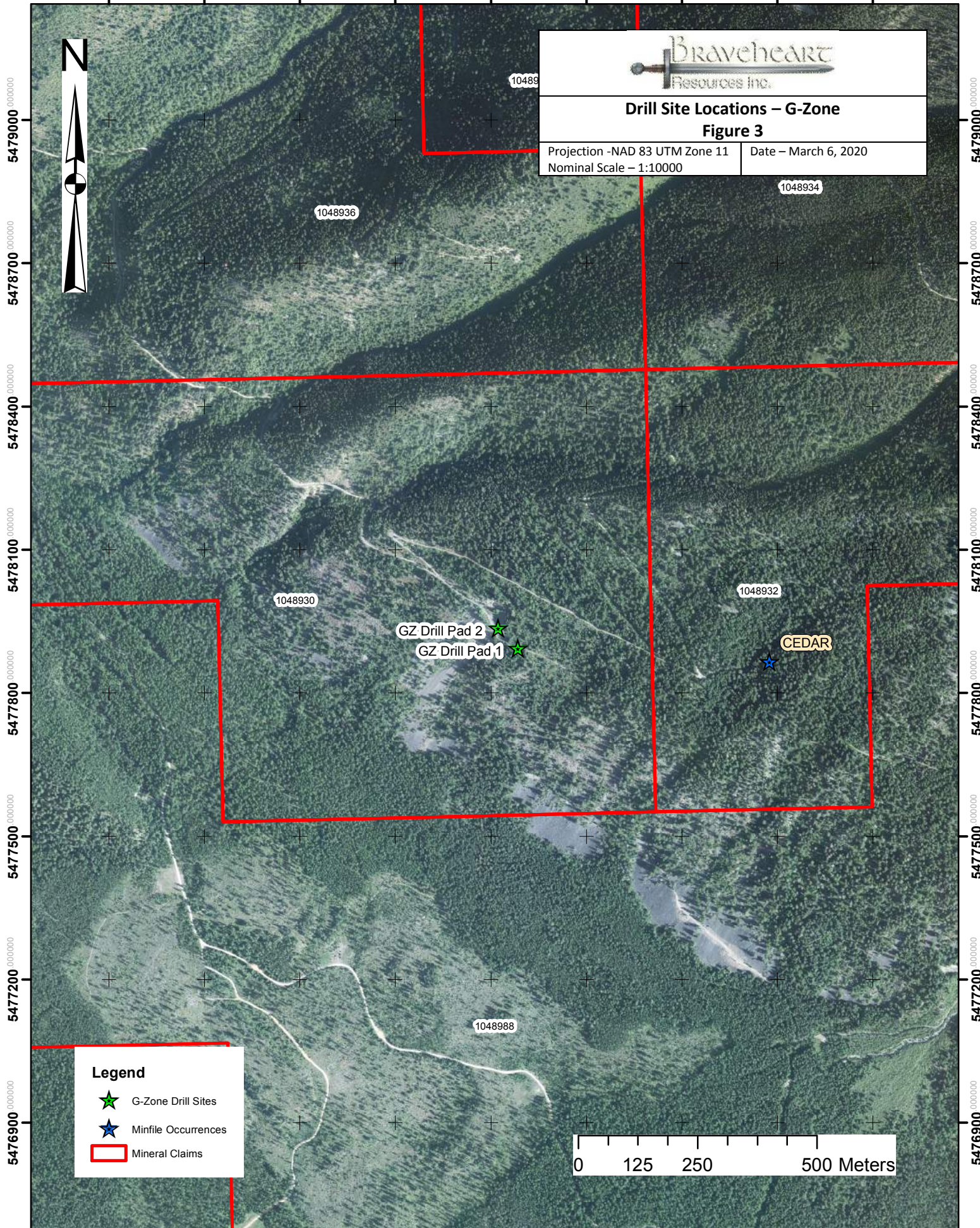
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**Braveheart Resources Inc.**

**Drill Site Locations – G-Zone**  
**Figure 3**




Projection -NAD 83 UTM Zone 11 Nominal Scale – 1:10000	Date – March 6, 2020
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**Legend**

-  G-Zone Drill Sites
-  Minfile Occurrences
-  Mineral Claims



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## Tenure

The Bull River Mine Property as currently defined is comprised of 25 Mine Claims totaling 10,374 ha in the Ft. Steele Mining Division and has been summarized below in Table 1 and Figure 4. The property is also underlain by Mining Lease 212493 which covers 486 ha and includes surface rights in addition to mineral rights. The mining lease was granted in February 1972 and expires in February 2023, with annual lease payments of \$9740.00 (Dzick and Ghaymghamian, 2013).

***Table 1 – Tenure Summary for the Bull River Mine Property***

Title Number	Claim Name	Owner	Issue Date	Good To Date	Area (ha)
212492		Bul River Mineral Corporation	1971/NOV/23	2019/NOV/23	14
212493		Bul River Mineral Corporation	1972/FEB/21	2021/FEB/21	486
515055		Bul River Mineral Corporation	2005/JUN/23	2022/MAY/16	1028
515057		Bul River Mineral Corporation	2005/JUN/23	2022/MAY/16	1238
515066	MINE SITE	Bul River Mineral Corporation	2005/JUN/23	2022/MAY/16	252
515403		Bul River Mineral Corporation	2005/JUN/27	2022/MAY/16	63
1045785	FELDSPAR	Bul River Mineral Corporation	2016/AUG/05	2022/MAY/16	840
1047428	DON CLAIM	Bul River Mineral Corporation	2016/OCT/24	2022/MAY/16	526
1047788	BUL 1	Bul River Mineral Corporation	2016/NOV/10	2022/MAY/16	503
1047789	BUL 2	Bul River Mineral Corporation	2016/NOV/10	2022/MAY/16	419
1048930		Bul River Mineral Corporation	2005/JUN/27	2022/MAY/16	105
1048932		Bul River Mineral Corporation	2005/JUN/27	2022/MAY/16	63
1048934		Bul River Mineral Corporation	2005/JUN/27	2022/MAY/16	84
1048936		Bul River Mineral Corporation	2005/JUN/27	2022/MAY/16	126
1048938		Bul River Mineral Corporation	2005/JUN/27	2022/MAY/16	84
1048940		Bul River Mineral Corporation	2005/JUN/23	2022/MAY/16	336
1048943		Bul River Mineral Corporation	2005/JUN/24	2022/MAY/16	252
1048988	BUL3	Bul River Mineral Corporation	2017/JAN/06	2022/MAY/16	1869
1056208		Bul River Mineral Corporation	2017/NOV/10	2022/MAY/16	1114
1056209		Bul River Mineral Corporation	2017/NOV/10	2022/MAY/16	336
1056210		Bul River Mineral Corporation	2017/NOV/10	2022/MAY/16	400
1061658	DON1	Bul River Mineral Corporation	2018/JUL/09	2022/MAY/16	105
1062075	CAMP	Bul River Mineral Corporation	2018/JUL/31	2022/MAY/16	42
1069583	DON WEST	Bul River Mineral Corporation	2019/JUL/10	2020/JUL/10	295
1069584		Bul River Mineral Corporation	2019/JUL/10	2020/JUL/10	168
1069585	DON EAST	Bul River Mineral Corporation	2019/JUL/10	2020/JUL/10	21
1069586	DON NORTH	Bul River Mineral Corporation	2019/JUL/10	2020/JUL/10	105



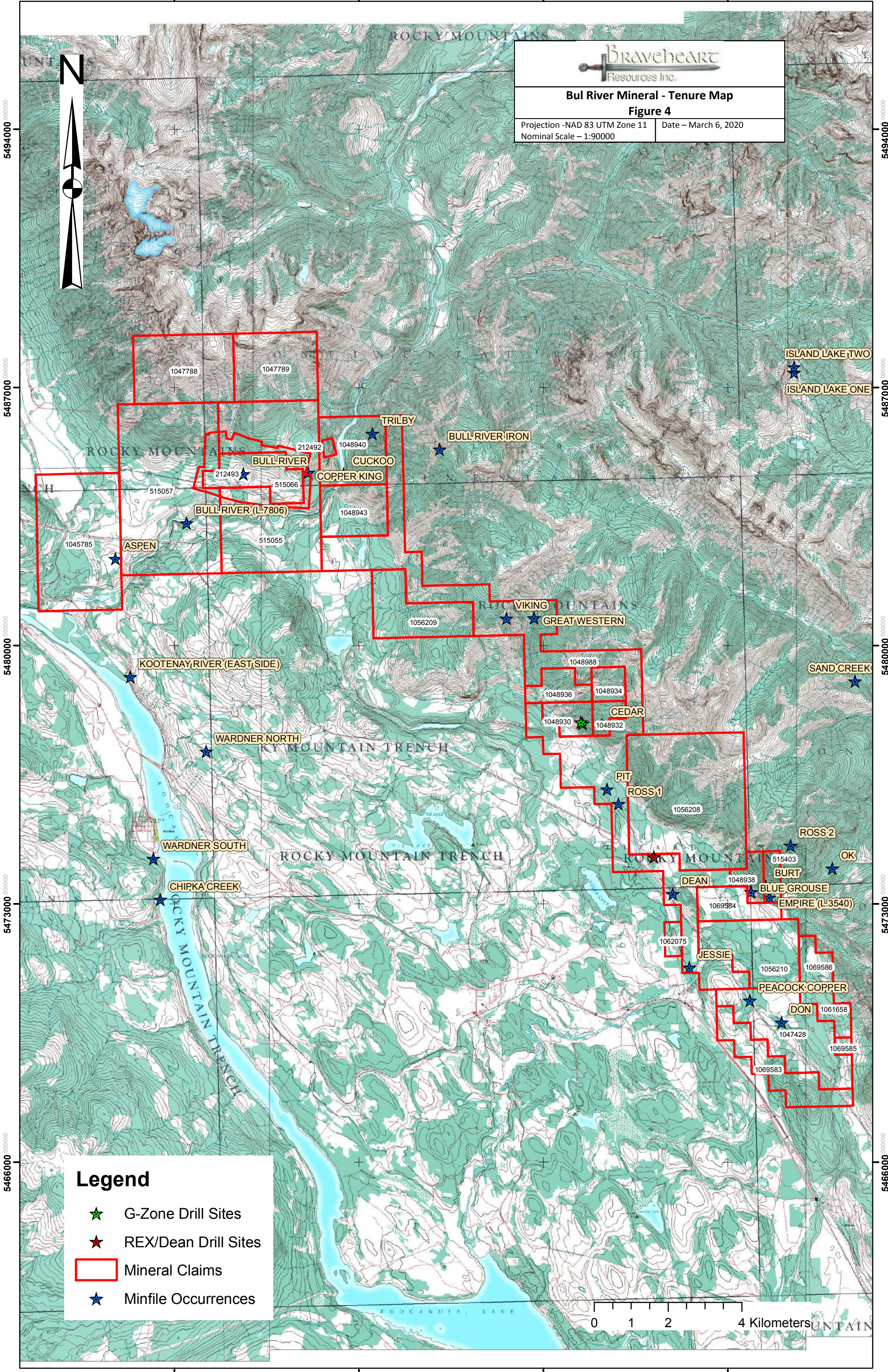
**Braveheart Resources Inc.**

**Bul River Mineral - Tenure Map**





**Figure 4**

Projection - NAD 83 UTM Zone 11      Date - March 6, 2020

Nominal Scale - 1:90000



**Legend**

-  G-Zone Drill Sites
-  REX/Dean Drill Sites
-  Mineral Claims
-  Minfile Occurrences

0 1 2 4 Kilometers

## History and Previous Work

The following summary of history and previous work on the Property has been presented as open citation from the technical report authored by Dzick and Ghaymghamian (2013), and from MINFILE 082GNW002 (2012).

Placer gold was first discovered in the early 1860s in the Bull River Canyon and numerous small mine workings have been excavated in the area since that time. Several claims were located in the vicinity of Burntbridge Creek in about 1896. The Silver Chief, Silver Reef, and Silver Buckeye claims were owned by David Griffith of Wild Horse Creek. Development work was done in a 30.0 metre crosscut adit and 4.5 metre shaft. The Daisy Fr. claim, owned by Thomas Bevans, was developed by shallow pits and open cuts. The Silver Chief (Lot 3548) and Sirdar (Lot 3554) were Crown-granted to Dave Griffith in 1899. No further activity was reported until 1927 when the Silver Chief, Sirdar, and Khedive claims were owned by A.B. Fenwick of Bull River. The workings at that time included a crosscut adit about 40.0 metres in length (MINFILE 082GNW002, 2012). No further work was reported on the Bull River mine site until 1968 when Placid Oil Co. ("Placid") optioned the property. Initially, Placid was targeting dyke structures similar to those found at the Sullivan mine and other Purcell Supergroup deposits but instead intersected supergene-type copper mineralization and an underlying copper-silver vein system.

The Property hosts the historic Dalton mine which started milling ore on October 1st, 1971, and continued from two open pits until June 10th, 1974, producing 7,260 t (16.0 M lb) of copper, 6,354 kg (204,274 oz) of silver, and 126 kg (4,055 oz) of gold from 471,900 t milled (MINFILE 082GNW002, 2012). The Dalton mine was owned by Placid, who also attempted to go underground to access additional resources but was unsuccessful in getting the portal collared in unstable ground.

Ross Stanfield purchased the assets of the Dalton Mine from Placid on March 5th, 1976 and transferred the assets to Bull River under incorporation on March 17th, 1976. For the next 20 years Bull River and its related subsidiary companies completed detailed exploration work (geology mapping, drilling, underground development and geophysical surveys) on the various claim groups held by R.H. Stanfield. In 1996, work began on a 5.4 m wide by 4.5 m high decline north of the open pits to provide access for underground drilling and sampling. Bull River reports that, to date, approximately 21,000.0 metres of development have been done, including exposure of the mineralized structures on seven levels along access drives and crosscuts. Mapping and sampling of these headings were conducted by Bull River personnel and, starting in 1999 by independent consultants contracted to the Stanfield Mining Group (SMG). Once these underground workings were established, underground diamond drilling was done by independent contractors (Dzick and Ghaymghamian, 2013). This work, along with surface and underground diamond drilling, and baseline studies, continued on the Gallowai-Bull River Mine property under various practitioners until 2009 when work was suspended due to a lack of funding (Dzick and Ghaymghamian, 2013). The underground operation at the Bull River mine site has never been put into commercial production. Exploration activities continued on the R.H. Stanfield group of exploration claims during the underground development stage up until 2001. Until recently the Property was held by Gallowai-Bull River mine through a joint venture partnership, which was then transferred to the SMG. In January 2019, all of the mining properties were transferred and are now owned 100 % unencumbered by Braveheart Resources Inc (<http://www.braveheartresourcesinc.com/>)

The work history of the Property as recorded with the British Columbia Government is provided below in Table 2. In addition, several internal documents authored on behalf of R.H. Stanfield or Gallowai-Bull River



mine, which are stored at the mine site, have been included in the work summary as documented in the Bibliography of the report completed by Graf (2014). In 2013 a technical report was authored by Dzick and Ghaymghamian (2013) (Snowden) on behalf of the Gallowai-Bull River mine which contains a detailed record of exploration and drilling activities (surface and underground) completed on the property between 1974 and 2009. The report can be found for reference on the company website <http://purcellbasin.com/site>. Dzick and Ghaymghamian (2013) indicate that a total of 72,486.9 m of underground drilling had been completed at the Bull River mine site for the period between 1996 – 2009. The 2013 report also states that during the time period of 1974 – 2009 over 100,000.0 metres of surface diamond drilling had been completed on the R.H. Stanfield Exploration Properties, of which the author can account for 27,333.3 metres; which was filed as assessment work with the British Columbia Government as outlined in Table 2.

***Table 2 – History of Exploration and Geological Studies on the Bull River Mine Property***

<b>Year</b>	<b>Assessment Report Number</b>	<b>Report Title</b>	<b>Work Completed</b>
1898	AR_1898	BC MEMPR Annual Summary of Mining and Exploration Activities	Early prospects described under the heading “Sand Creek”, “Bull River” and “Burntbridge Creek” (P. 1002-1003).
1899	AR_1898	BC MEMPR Annual Summary of Mining and Exploration Activities	Early prospects described under the “Ft. Steele Mining Division” and “Crown Grants Issued in 1899” headings. (P. 660, 841).
1900	AR_1900	BC MEMPR Annual Summary of Mining and Exploration Activities	Early development work on two prospects, Star Group and Old Abe Group are reported (P. 798).
1929	AR_1929	BC MEMPR Annual Summary of Mining and Exploration Activities	The Empire and Strathcona Properties are reviewed and an update on work is reported (P. 298).
1930	AR_1930	BC MEMPR Annual Summary of Mining and Exploration Activities	The Empire and Strathcona copper prospects. A general overview of property ownership and development work are reported. Ore grade assays from a composite sample are provided (P. 243, 378).
1937	AR_1937	BC MEMPR Annual Summary of Mining and Exploration Activities	The Copper Silver deposits are described under the “South-East Kootenay Area” providing a detailed overview of development on the “Burnt Group” (P. E41-E42 & 142).
1965	AR_1965	BC MEMPR Annual Summary of Mining and Exploration Activities	Empire, Strathcona (Altamont Exploration Company) - First Documentation of R.H. Stanfield as President of the Exploration Company. Five Diamond Drill Holes, totalling 365.0 m completed to explore the ore body. Old adits opened and investigated (P. 199).
1966	AR_1966	BC MEMPR Annual Summary of Mining and Exploration Activities	Empire, Strathcona (Altamont Exploration Company) Nine BX-WL holes totalling 1,219.2 m of surface drilling and four holes totalling 213.3 m of underground drilling in the tram-line tunnel (P. 242).
1971	3436	Geochemical Survey Rio Alto Exploration Inc.	Geochemical surveying on the Bull River Prospect.
1971	3439	Geochemical Report Rio Alto Exploration Inc.	Geochemical Surveying on the Sand Creek Area “B” Prospect.
1972	3700	Geological Report covering claims 1 – 2 miles east of Placid Oil Company's Bull River Mine for Placid Oil Minerals	Geological field mapping and air photo interpretation.
1972	3929	A Geophysical Report on a Seismic Refraction Survey Cranbrook area of British Columbia for Rio Alto Exploration Inc.	A total of 10 complete set-ups, each 550 feet long, were surveyed to determine depth to bedrock, and locate the position of the Bull River Fault.
1973	Internal Report # 1973-01-RHS	Report on the Holdings of R.H. Stanfield, Fort Steele Mining Division, BC	

Year	Assessment Report Number	Report Title	Work Completed
1974	Internal Report # 1974-03-FORT)	Report on the Ross Claim Groups, (Galloway Property) for Fort Steele Mining Corporation, Fort Steele Mining Division, British Columbia	
1976	5900	Report: Diamond Drilling Ross Group # 2 for R.H. Stanfield	Two Drill Holes Completed (76-3 & 76-4) totalling 654.4 m.
1976	5904	Report: Churn Drilling Lillea #1-#4 for R.H. Stanfield	Churn drill overburden to depth of 35.0 m. Samples collected approximately every metre.
1976	5905	Diamond Drilling Altamont Group # 1 for R.H. Stanfield	One Drill Hole Completed (76-4 continued) to a depth of 152.4 m.
1976	5906	Report: Diamond Drilling Treasure Group for R.H. Stanfield	One Drill Hole Completed (76-6) to a depth of 152.4 m.
1976	5942	Drilling Cost Statement "Pit Group # 2" for R.H. Stanfield	Two Drill Holes Completed (76-9 & 76-11) totalling 145.9 m.
1976	Internal Report # 1976-03-RHS	Report on the Holdings of R.H. Stanfield. Geology and Ore Potential	
1977	6031	File 166 – Fort Steele Diamond Drilling Report on the Rossco Group for R.H. Stanfield	One Drill Holes Completed (76-8, 10) totalling 800.7 m.
1977	6244	Report Diamond Drilling Sunbeam Group for R.H. Stanfield	One Drill Hole extended (76-10-B) totalling 467.0 m.
1978	7086	Airborne Geophysical Survey Infrared Photography and Ground Electromagnetic Survey Ronka 16 VLF 82G/11 Steeples 1-30 Claims for R.H. Stanfield	The surveys were completed to ascertain if geophysics could detect possible occurrences of mineral deposits. The results were negative.
1980	8014	Report: Diamond Drill Hole BR1-79 Steeples 1:352 (11) and Steeples 2: 352 (11) for R.H. Stanfield	One Drill Hole Completed (BR 1-79) totalling 614.4 m. Report only covers overburden drilling.
1980	8137	Geophysical Surveys and Drilling – RH Stanfield Property for R.H. Stanfield	134.0 line-km of Magnetometer and VLF-EM Surveys on two grids. Drilling was completed to a depth of 15.0 metres in 6-79. Churn drilling tested 27.0 m of overburden in two holes.
1980	8531	Report: Diamond Drill Hole BR 1-80 Steeples 11: 362 (11) and Steeples 12: 362 (11) for R.H. Stanfield	One Drill Hole Completed (BR-1-80) to a depth of 195.0 m. The top 966 metres were drilled on the Steeples 11 claim.
1980	8584	Report: Diamond Drill Hole BR 1-79 Steeples 1:35 (11) and Steeples 2: 352(11) for R.H. Stanfield	One Drill Hole Completed (BR 1-79) totalling 614.4 m.
1980	8695	Report: Diamond Drill Hole BR 1-80 Aspen 9: 787 (10) and Aspen 10: 788 (10) for R. H. Stanfield	One Drill Hole Completed (BR 1-80) totalling 369.0 m (continuation of the hole in AR 8531).

Year	Assessment Report Number	Report Title	Work Completed
1981	9486	Drilling Reports: Diamond Drill Hole B-2-80 R.H. Stanfield Property Dogwood 12 229 (6) and Dogwood 14 230 (6); Churn Drill Hole # 2 Stanfield Property Cedar 1 205 (6) and Cedar 2 206 (6) for R.H. Stanfield	One Drill Hole Completed (B-2-80) totalling 92.3 m (abandoned) and One Churn Drill Hole 36.0 m.
1982	10304	Report on Diamond Drilling Property – R.H. Stanfield Property for R.H. Stanfield	Six Diamond Drill Holes Completed (1-79, 2-79, 2-80, 3-79, 4-79, 5-79,) totalling 5,997.0 m.
1982	10570A	Geophysical Report Helicopter – Bourne Two Frequency Electromagnetic and Magnetic Survey – R.H. Stanfield Property for R.H. Stanfield	1,662.0 line-km EM-Magnetometer survey completed on 68 claims completed by Apex Airborne Surveys Ltd.
1982	10570B	Report on a Helicopter Borne Multi-Frequency Electromagnetic and Magnetic Survey on the Kootenay River Project in the Galloway Area, British Columbia for owner and operator Mr. R.H. Stanfield	1,662.0 line-km EM-Magnetometer survey completed on 68 claims completed by Apex Airborne Surveys Ltd.
1983	11681A&B	Reconnaissance Geophysical Survey Helicopter – Borne V.L.F Electromagnetic and Magnetic Galloway Area Ft. Steele Balsam 1-4 & 5-12, Cedar 1 & 2, Cedar South 1 & 2, Elderberry 1, Elderberry South 1 & 2 for R.H. Stanfield	380.0 line-km VLF-EM Airborne Survey by Apex Airborne Surveys Ltd.
1984	12414	Bull 1 Mineral Claim Southeastern British Columbia Summary of 1983-1984 Exploration for Robert J. Morris.	Work in 1983-84 included a literature search and one day on the claim looking for outcrop, with no success.
1986	15471	Drilling Report for the Bull River Mine for R.H. Stanfield	A total of two holes were drilled totalling 162.0 m. (seven Rotary Cyclone Drill Holes Completed through overburden totalling 184.0 m).
1986	15624	Core and Rotary Drilling Report for the Aspen 9 (787), Aspen 10 (788), Aspen 10A (2576) Claims for R.H. Stanfield	Four Drill Holes Completed totalling 463.0 m.
1986	15858	Cyclone Rotary Drilling on the Aspen 11, 12, 13, 14, 15 20 Unit Claims for R.H. Stanfield	Four Vertical Holes were drilled attempting to reach bedrock. Unsuccessful. Total metres drilled: 131.0 m.
1987	16221	Drilling Report on the Cedar 1-5 Claims (100 Units) for R.H. Stanfield	Two air percussion rotary holes were drilled totalling 47.2 m.
1987	16222	Drilling Report on the Cedar 10, Cedar 12, Cedar 13, Cedar 14 (80 Units Total) for R.H. Stanfield	One Drill Hole (c-10-1-86) was drilled from a depth of 545.0 – 1346.0 m totalling 801.0 m.
1987	16235	Drilling and Physical Work Report for the Dogwood 8 & Dogwood 10 Claims (40 units total) for R.H. Stanfield	One Drill Hole (P-D-10-87) was drilled totalling 56.3 m.
1988	17757	Assessment Report for Drilling on the Cedar 3 Claim for R.H. Stanfield	Two Drill Holes totalling 246.2 m and 5.0 km or road work.

<b>Year</b>	<b>Assessment Report Number</b>	<b>Report Title</b>	<b>Work Completed</b>
1988	17758	Drilling and Physical Work Report for the Dogwood 8 Claim for R.H. Stanfield	One Drill Hole totalling 122.8 m and 13.0 km of road work.
1988	17813	Assessment Report for Drilling on the Dogwood 5 Claim for R.H. Stanfield	One Drill Hole totalling 183.7 m.
1988	17850	Assessment Report for Drilling on the Cedar 8 Claim for R.H. Stanfield	Two Drill Holes totalling 110.5 m.
1989	18227	Assessment Report for Cyclone Rotary Mud Drilling on the Aspen Group 1-A for R.H. Stanfield	One Drill Hole abandoned (A-9-1-88) totalling 91.4 m.
1989	18368	Report on Steele Property prepared for Bul River Mineral Corporation Ltd.	One Drill Hole completed (BR 3-87) from 739.8 m to 1119.2 m, totalling 379.4 m, and 7 Rotary Holes completed totalling 679.0 m.
1989	19034	Drilling Report on Cedar 1A, Cedar 3A, Dogwood 1A, Dogwood 4 Groups for R. H. Stanfield	Ten Drill Holes completed (C3-88, C8-G-1-88, D1-1-88, D2-2-88, D10-1, D10-2, D10-PP1, D10-PP2) totalling 544.8 m.
1990	19651	Report on the Steeples Property Groups 1A – 8A for R.H. Stanfield	One Drill Hole completed (BR5-89) totalling 68.5 m and 15 cyclone rotary air-mud drill holes totalling 512.0 m.
1990	20796	Report on Rotary/Percussion Drilling on the Aspen 9, 10, 10A of Aspen Group 1A for R.H. Stanfield	Two percussion drill holes completed (A1-90 & A2-90) totalling 88.3 m.
1991	21155	DIGHEM <sup>IV</sup> Survey for Bul River Mineral Corporation Ltd. (R.H. Stanfield) Steeples Claim Block & Portions of the Aspen Claim Block British Columbia	1,206.0 line-km of DIGHEM survey completed which identified several anomalies.
1991	Internal Report # 1991-01-SMG	Report on the Properties of Gallowai Metal Mining Corporation, Fort Steele Mining Division, British Columbia	
1992	21737	Report on Drilling on the Dogwood # 5, Elderberry # 5, #6, #7 and #8 (all 20-unit claims) for R.H. Stanfield	Two percussion holes completed (D5.1.91 and D5.2.92) totalling 123.7 m.
1992	22781	Report on Drilling on the Steeples Group 2B (Steeples # 12, 14, 16, 18 and 19 all 20-unit claims) for R.H. Stanfield	One Drill Hole completed (BR-3-92) totalling 602.6 m.
1992	22997	Report on Drilling on the Cedar Group 1A for R.H. Stanfield	One Drill Hole completed (C1.92) totalling 1058.2 m.
1992	Internal Report # 1992-01-BB	Report on the Properties of the R. H. Stanfield Group. Fort Steele Mining Division, British Columbia	

Year	Assessment Report Number	Report Title	Work Completed
1992	Internal Report # 1992-02-GAL	Report on the Properties of the R.H. Stanfield Group. Fort Steele Mining Division, British Columbia	
1993	23012	DIGHEM Airborne Survey on The Balsam 1A, Balsam 2A, Cedar 2A, Cedar 3A, Dogwood 3A Claim Blocks for R.H. Stanfield	337.0 line-km (Big Bear Property) and 65.0 line-km (Sand Creek Block) of DIGHEM survey completed.
1993	23602	Investigation of Commercial Feldspar Resources on the Aspen 9, 10, 11, & 12 Claims for R.H. Stanfield	Re-logging of Drill Hole A11-1-87) total depth 532.0 m; two percussion drill holes totalling 202.4 m.
1993	23615	Report on Drilling BR 2.93/94 on the Steeples Group #1C for R.H. Stanfield	One Drill Hole completed (BR-2-93) to a depth of 690.9 m.
1993	Internal Report # 1993-01-SMG	Exploration Report for the R.H. Stanfield Group, Fort Steele Mining Division, British Columbia	
1994	23632	Drilling PBR 2.94 on the Steeples Group # 2B for R.H. Stanfield	One Drill Hole completed (PBR 2.94) totalling 291.4 m.
1992-94	23786	Diamond Drilling - 1992 through 1994 on the Steeples Group # 1C for R.H. Stanfield	Five Drill Holes reported from the period of 1992-1994 (BR.1.92, BR2.92, BR4.92/93, BR1.93, BR1.94) totalling 4,106.8 m. (978.7 m of percussion drilling utilized to pre-drill through overburden)
1995	24240	Drilling Report on Steeples Group 1C and Steeples Group 2B for R.H. Stanfield	Two Drill Holes Completed (BR 1-95, BR 2-95) totalling 1,910.4 m.
1997	25129	Drilling Report on Cedar Group 3A for R.H. Stanfield	Two Drill Holes Completed (C8-1-96/97 & C8-2-96/97) totalling 312.4 m.
1997	25191	Drilling Report on Aspen Group # 1 for R.H. Stanfield	Seven Percussion Holes Completed (F5-96, F6-96, F7-96, F8-96, F9-96, F10-96, F11-96, F12-96) totalling 1,083.4 m.
1998	25637	Drilling Report on CD Group # 1 for R.H. Stanfield	One Drill Holes Extended (C8-1-96/97) totalling 700.4 m (extension from previous year).
1998	25678	Assessment Report on the Pleasant Surprise Mineral Claims for Geologic Mapping and Geochemical Sampling by/for C.C. Downie P. Geo.	One day geological reconnaissance program completed to prospect for Sullivan type Pb-Zn mineralization or shear hosted Cu-Au mineralization.
1998	25683A	Drilling Report on AB Group # 1 for R. H. Stanfield	Two Drill Holes Completed (A9-1-98 & A9WW-98) totalling 873.2 m.
1999	25881A	Drilling Report on ABJ Group # 1 for R.H. Stanfield	One Drill Hole Extended (A9-1-98) totalling 498.0 m.
1999	Internal Report # 1999-01-BUL	1998 Exploration Report for Bul River Mineral Corporation, Fort Steele Mining Division, British Columbia	

Year	Assessment Report Number	Report Title	Work Completed
2000	26323A	Assessment Report on the Pleasant Surprise Mineral Claims for Geologic Mapping and Geochemical Sampling by/for C.C. Downie P. Geo.	One day field program consisting of soil, rock and silt sampling, as well as 1:1000 scale geological mapping.
2001	26638A	Drilling Report on the Bul River Group for R.H. Stanfield	One Underground Drill Hole (BRU00-60) totalling 366.3 m.
2001	Internal Report # 2001-07-SMG	2001 Report on the Geology and Mineralogy of Stanfield Mining Group Claims, Fort Steele Mining Division, British Columbia	
2011	NI43-101	Technical Report on the history of work on the property. Prepared by RPA on behalf of Gallowai-Bul River Mine	
2012	NI43-101	Technical Report for a NI43-101 Compliant Resource Estimate. Prepared by RPA on behalf of Gallowai-Bul River Mine	
2013	NI43-101 Technical Report	Gallowai-Bul River Technical Report Project Number 12V1249. Prepared by Snowden for Gallowai-Bul River Mine	
2013	Internal Summary Report	2013 Under Ground Drilling Summary. Prepared by Moose Mountain Technical Services for Gallowai-Bul River Mine	Seven Underground Drill Holes Completed (BRU-13-01 to 07) totalling 1,156.0 m.
2013	Scoping Study	Gallowai-Bul River Mine Scoping Study. Prepared by Moose Mountain Technical Services for Gallowai-Bul River Mine	
2016	36586	Technical Report for the Bull River Mine Property	A total of 320 b-horizon samples were collected from 23 survey lines during the course of the 17 person-day field program. Total expenditures on the Property in 2016 were approximately \$24,200.00.
2017	37195	Technical Report for the Bull River Mine Property	Define exploration targets peripheral to copper ore body defined in the NI43-101 through the collection of rock samples from underground working, petrophysical characterization of the rocks samples and the processing Dighem airborne EM (AEM) data acquired during 1991-1997.
2018	37552	Technical Report for the Bull River Mine Property	Geological analysis of the previously unlogged borehole Grand 10-05 and pXRF sampling of a defined interval of interest in borehole Grand 10-05
2018	37660	Technical Report for the Bull River Mine Property	Soil Sampling Program on Don and G Zone/Cedar Claims.
2018	37983	Technical Report for the Bull River Mine Property	Geological Mapping and Sampling of Rex and G Zone Claims, including 36 hec of Drone Imagery; 9.6 Line Km Ground Based Magnetic Orientation Survey on Rex Claims; 3.2 Line Km Soil Sample Program on Murray Lake Claims

<b>Year</b>	<b>Assessment Report Number</b>	<b>Report Title</b>	<b>Work Completed</b>
2019	38526	Technical Report for the Bull River Mine Property	14 Surface Drill Holes Completed on Empire Strathcona Claims (ES-19-01 to ES-19-14) Totaling 1388.61m




## Geology

### Regional Geology

The regional geologic setting of the Property is shown in Figure 5. The map was created using BCGS Open File 2017-8 compilation map (Cui et al., 2017). The Property is located within the Belt-Purcell Basin, a Meso-Proterozoic intracontinental rift filled by marine and fluvial sediments that comprise the Belt-Purcell Supergroup. Approximately 10% of the exposed area of Belt-Purcell Basin can be found in Canada, where it is referred to as the Purcell Basin and Purcell Supergroup (Lydon, 2007). The Belt-Purcell Basin is flanked by Upper Proterozoic Windermere Group or Paleozoic sedimentary rocks (Höy et al., 2000). The Aldridge Formation defines the base of the Purcell Supergroup. Within an approximate 30.0 km radius of Cranbrook, British Columbia, the Aldridge Formation also hosts the world class Sullivan deposit as well as the Estella, Kootenay King, and St. Eugene mineral deposits (Allen, 1989).

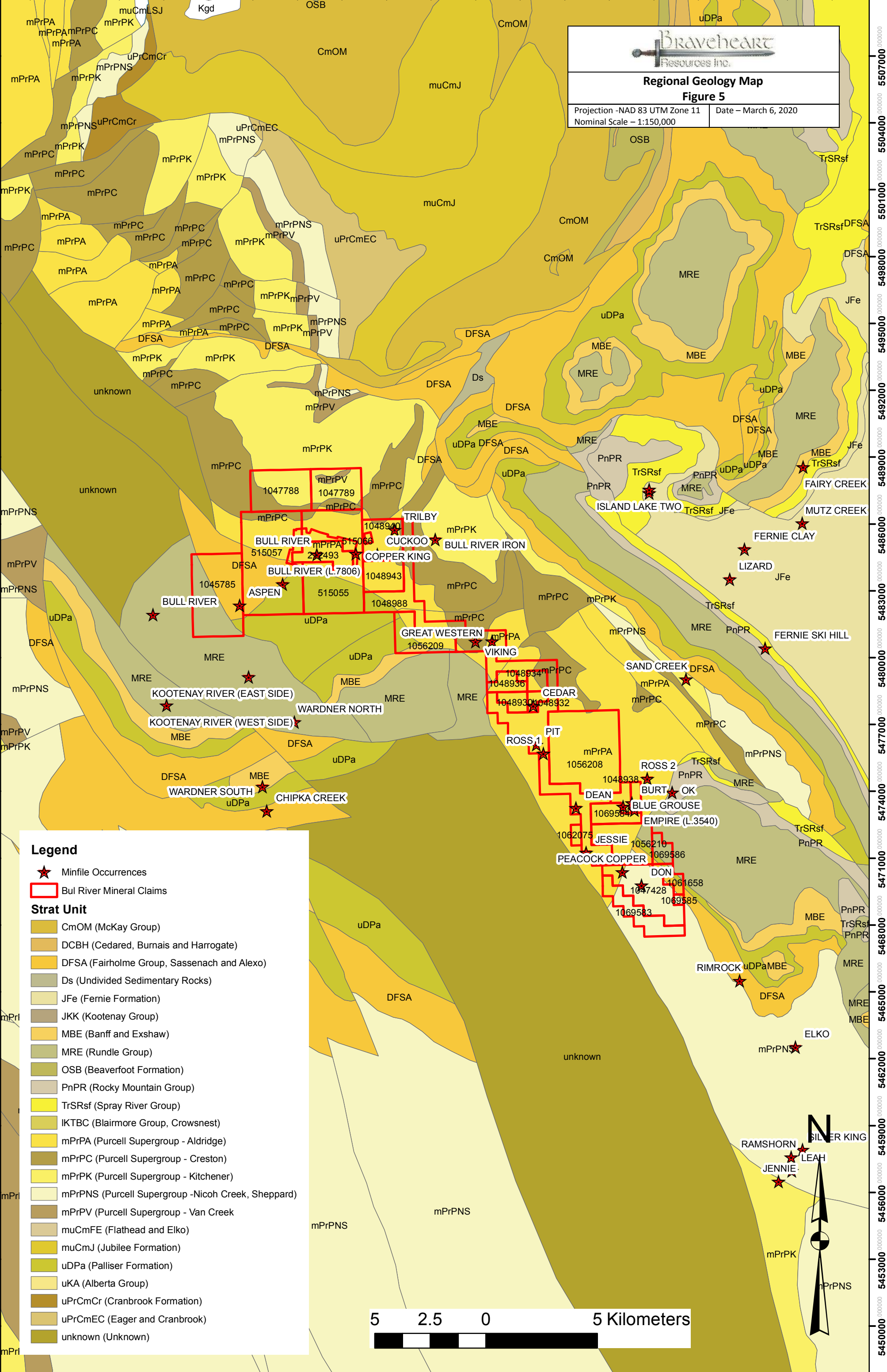
Extensional faulting and sporadic magmatism occurred from about 1,500 Ma to 1,320 Ma and is at least partially coincident with the East Kootenay Orogeny. The East Kootenay Orogeny reflects burial metamorphism of the thick sedimentary pile in the high geothermal gradient of an actively rifting environment. Syn-sedimentary faulting associated with rifting resulted in the rift-fill thicknesses of turbidites and intercalated sills of the Aldridge sequence of up to 12.0 km. Two directions of syn-sedimentary faulting have been recognized: north to northwest trending rift-parallel (extensional) and east to northeast trending transfer faults. Examples of the former include faults that control the north trending Sullivan Corridor and the Iron Range fault northeast of Creston. Examples of the later include precursors to the Moyie-Dibble Creek fault, which are found north of the Property, and St. Mary-Boulder Creek fault system (Lydon, 2007).

Beginning with the East Kootenay Orogeny (1,350 Ma to 1,300 Ma), the northwest portion of the Purcell Basin appears to have been subjected to east-west faulting along with magmatic generation along its western boundary. During the subsequent Goat River Orogeny (900 Ma – 800 Ma), the Purcell Anticlinorium was formed as a result of crustal shortening (Höy et al., 2000). The Property lies along the eastern flank of the Rocky Mountain trench, which forms the valley of the Kootenay River system in the area and is contained within the Hosmer thrust sheet east of the inferred trace of the Rocky Mountain trench fault (Dzick and Ghaymghamian, 2013). The Hosmer thrust sheet is the structurally highest thrust package in the Western Range of the Rocky Mountains (Dzick and Ghaymghamian, 2013). The Rocky Mountain trench fault is a west-side-down Tertiary normal fault with a minimum of 5.0 km of vertical displacement. Structure in the region is dominated by broad, open, east-plunging folds (Höy et al., 2000).



**Regional Geology Map**  
**Figure 5**

Projection -NAD 83 UTM Zone 11    Date - March 6, 2020  
Nominal Scale - 1:150,000



**Legend**

- ★ Minfile Occurrences
- Bul River Mineral Claims

**Strat Unit**

- CmOM (McKay Group)
- DCBH (Cedared, Burnais and Harrogate)
- DFSA (Fairholme Group, Sassenach and Alexo)
- Ds (Undivided Sedimentary Rocks)
- JFe (Fernie Formation)
- JKK (Kootenay Group)
- MBE (Banff and Exshaw)
- MRE (Rundle Group)
- OSB (Beaverfoot Formation)
- PnPR (Rocky Mountain Group)
- TrSRsf (Spray River Group)
- KTBC (Blairmore Group, Crowsnest)
- mPrPA (Purcell Supergroup - Aldridge)
- mPrPC (Purcell Supergroup - Creston)
- mPrPK (Purcell Supergroup - Kitchener)
- mPrPNS (Purcell Supergroup - Nichol Creek, Sheppard)
- mPrPV (Purcell Supergroup - Van Creek)
- muCmFE (Flathead and Elko)
- muCmJ (Jubilee Formation)
- uDPa (Palliser Formation)
- uKA (Alberta Group)
- uPrCmCr (Cranbrook Formation)
- uPrCmEC (Eager and Cranbrook)
- unknown (Unknown)



## Property Geology

The geologic setting of the Property is shown in Figure 6. The map was created using BCGS Open File 2017-8 compilation map Cui et al., 2017).

The Property, and more specifically the past producing mine and numerous mineral occurrences, are underlain by the Purcell Supergroup, a thick sequence of terrigenous clastic, carbonate and minor volcanic rocks of Middle Proterozoic age (Höy, 1993). The Aldridge Formation is characterized by thick successions of graded sandy turbidites and interbedded laminated siltstones and argillites. The turbidites are intruded by the dioritic to gabbroic Moyie sills and dykes. To the east, the Upper Aldridge rocks, composed of argillites and siltites, overlie the turbidites. Mineralization hosted within Aldridge Formation metasedimentary rocks is typically observed as fine-grained pyrite and pyrrhotite, up to several percent, that oxidizes when exposed on surface (Höy et al., 2000). Further east, the Creston Formation is exposed. Creston Formation rocks comprise a shallow water platformal and fan-delta succession of predominantly quartzites and siltites. South of the Bull River, Creston Formation rocks are overlain by Kitchener Formation carbonate rocks. Cretaceous monzonite-dacite stocks, plugs and dikes intrude Purcell Supergroup rocks and younger Paleozoic shallow water sediments within the project area (Höy et al., 2000). The southernmost claim group, where the work was completed in 2016 is underlain by Precambrian Gateway Formation comprised of siltstone and dolomitic siltstone south of the Hosmer Thrust Fault and is juxtaposed against Paleozoic rocks of the Rundle Formation (Graf, 2014). Graf (2014) cautions that due to significant cover in the area of the “Don Claim”, it is not clear if the Gateway Formation geological interpretation is correct.

### Alteration

Alteration at the past producing mine was described by Dzick and Ghaymghamian (2013), and MINFILE (MINFILE 082GNW002, 2012) as silicification and carbonatization (siderite flooding) which occurs within host rock in contact with veins and up to tens of metres from the veins. Masters (1999) describes the alteration as silica and chlorite. Personal observation of alteration by the author indicate that the siderite flooding preferentially permeates thin-bedded silty metasedimentary rocks in proximity to quartz-siderite veining, and upon weathering imparts a conspicuous rusty-orange stain on the rocks. Gangue mineralogy of the veins in the underground mine and surrounding prospects is variable, with the eastern parts of the deposit consisting of quartz and siderite. The western part of the vein system is dominated by siderite (Baldys, 2001).

### Mineralization


Mineralization at the past producing mine, which is similar to that of the Rex Zone, consists of pyrite, pyrrhotite, and chalcopyrite with minor local galena, sphalerite, arsenopyrite, cobaltite and traces of tetrahedrite and native gold. Sulphides range from massive, irregular bodies within the quartz-siderite vein system to thin discontinuous veins, veinlets, and disseminations in the host rock (Höy et al., 2000). The Bull River deposit and related Cu-Ag mineral occurrences have been described as a Churchill-type vein copper-silver deposit (Lefebure, 1996).

Mineralization at the G Zone (Cedar) is characterized by massive galena±pyrite-chalcopyrite-sphalerite hosted within quartz and limonite after siderite in rusty-weathering sheared metasedimentary rocks of the Aldridge Formation (Graf, 2014). A 1978 company report authored by Allen stated “a sample of the galena assayed 85.1 % lead and 36.92 oz/t silver, and a check sample assayed 84.0 % lead and 37.9 oz/t

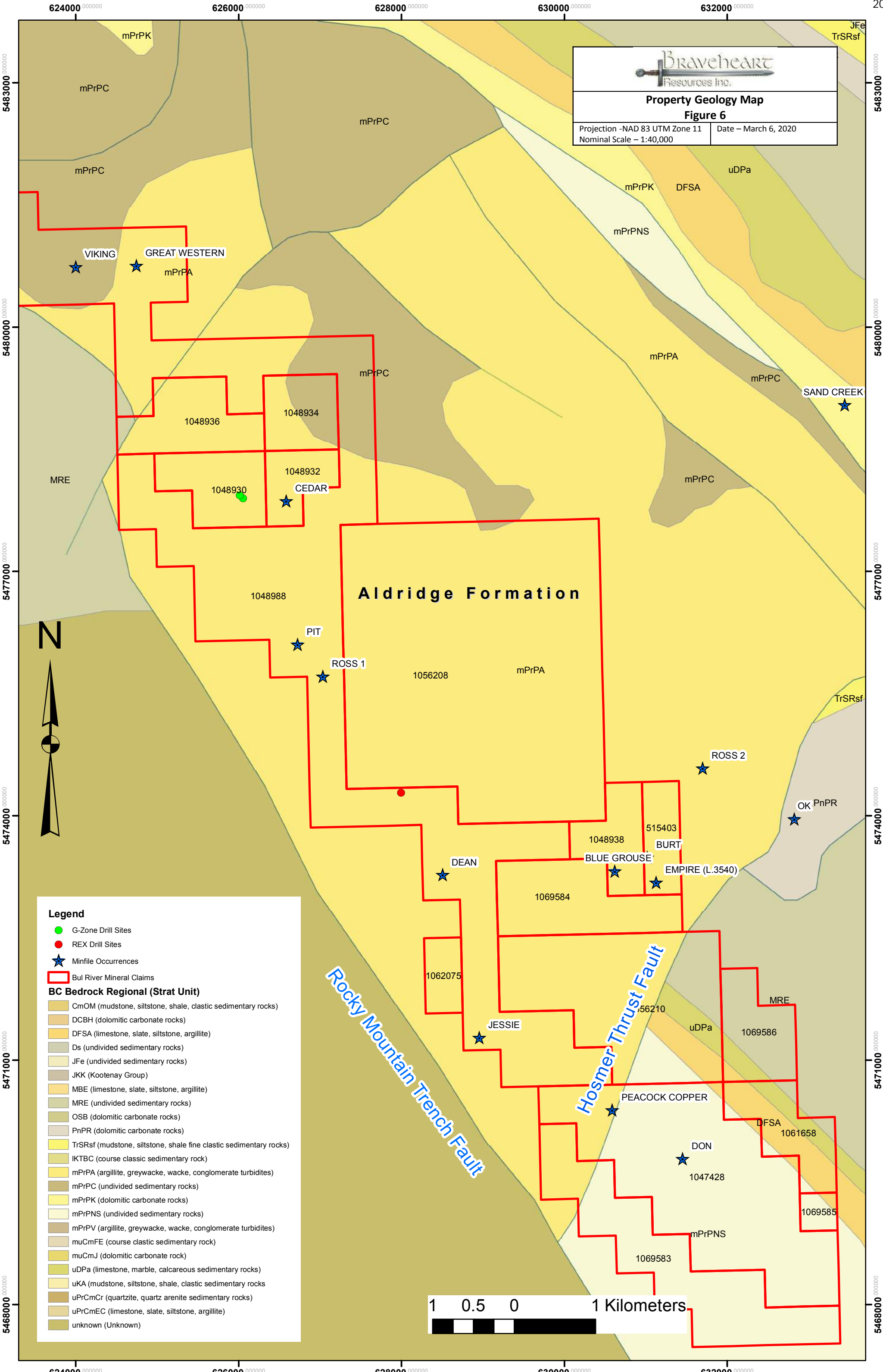
silver” (Graf, 2014). The style of mineralization at the G Zone is more akin to the veins mined at St. Eugene (Purcell Supergroup), and to a lesser extent with the Coeur d'Alene silver-lead-copper deposits (Dzick and Ghaymghamian, 2013) in Idaho (Belt-Purcell).

### **Structural Geology**

Three tectono-stratigraphic terranes subdivide the area covered by the Braveheart Resources Inc. mineral tenure holdings. The Steeples Range domain is bounded to the north by the Dibble Creek fault and to the south by the Bull River Canyon fault and lies to the north of the other domains. The Sand Creek-Lizard Range domain lies south of the Bull River Canyon fault and north of the Sand Creek fault and contains the Lizard Range of mountains. The southern domain is the Broadwood Anticline whose boundary is the Sand Creek fault to the north and Mount Broadwood to the south. The Steeples Range and Sand Creek–Lizard Range domain are part of the Lizard segment of the Hosmer Thrust (Masters, 1990). In the vicinity of the property, the trench is synclinal with major west dipping faults on its east side (Masters, 1990). Masters (1999) states that the structural geology of the property is complex, with structural evolution mainly associated with the Hosmer Thrust.



**Property Geology Map**  
**Figure 6**  
 Projection -NAD 83 UTM Zone 11  
 Date - March 6, 2020  
 Nominal Scale - 1:40,000



**Legend**

- G-Zone Drill Sites
- REX Drill Sites
- Minfile Occurrences
- Bul River Mineral Claims

**BC Bedrock Regional (Strat Unit)**

- CmOM (mudstone, siltstone, shale, clastic sedimentary rocks)
- DCBH (dolomitic carbonate rocks)
- DFSA (limestone, slate, siltstone, argillite)
- Ds (undivided sedimentary rocks)
- JFe (undivided sedimentary rocks)
- JKK (Kootenay Group)
- MBE (limestone, slate, siltstone, argillite)
- MRE (undivided sedimentary rocks)
- OSB (dolomitic carbonate rocks)
- PnPR (dolomitic carbonate rocks)
- TrSRsf (mudstone, siltstone, shale fine clastic sedimentary rocks)
- IKTBC (course classic sedimentary rock)
- mPrPA (argillite, greywacke, wacke, conglomerate turbidites)
- mPrPC (undivided sedimentary rocks)
- mPrPK (dolomitic carbonate rocks)
- mPrPNS (undivided sedimentary rocks)
- mPrPV (argillite, greywacke, wacke, conglomerate turbidites)
- muCmFE (course clastic sedimentary rock)
- muCmJ (dolomitic carbonate rock)
- uDPa (limestone, marble, calcareous sedimentary rocks)
- uKA (mudstone, siltstone, shale, clastic sedimentary rocks)
- uPrCmCr (quartzite, quartz arenite sedimentary rocks)
- uPrCmEC (limestone, slate, siltstone, argillite)
- unknown (Unknown)



## 2019 Field Program

### 2019 Scope and Goals

From July 20<sup>th</sup> until August 14<sup>th</sup>, 2019, drilling activities were completed on Braveheart Resources Inc. mineral claims 1048930 and 1048988, targeting the G Zone and Rex Zone exploration areas

Total expenditures on the project described in this report were \$285,194.91 (Details of project expenditures can be found in Appendix II)

The goal and scope of the 2019 exploration drill program are outlined below and have been described upon the area of the property worked:

- G Zone

The goal of the G Zone diamond drill program was to evaluate the economical potential of a historically reported structurally controlled massive sulphide lense consisting of strained galena and some sphalerite. It is hosted by Aldridge Formation metasediments including argillites and siltites. This lense was explored by a drift in the past, however detailed mapping of the lense does not exist and the exploration drift is not accessible at this time.

Between July 20<sup>th</sup> and July 30<sup>th</sup>, 2019, six (6) NQ2 sized holes were drilled by on the upper G Zone, by Lucky Drilling Ltd. Total meterage for the program was 501.02m, from which 65 samples of halved core were collected and sent for analysis to Bureau Veritas Mineral Laboratories, located in Vancouver, B.C.).

- Rex Zone

The goal of the 2019 drill Rex Zone drill program was designed to further evaluate the economical potential of the vein system, which had previously been explored in 2018 by geochemical, geological, and geophysical surveys (McCuaig, M. 2019).

The 'REX' zone is a network of siderite-qtz-pyrrhotite-pyrite +/- chalcopyrite veins and quartz-pyrrhotite-chalcopyrite veins, well-exposed in an existing gravel pit. The veins are known to carry important values in copper with minor silver and unimportant gold.

Between August 3<sup>rd</sup> and 14<sup>th</sup>, the company drilled a total of five (5) NQ2 sized holes on the Rex Zone structure for a total of 1196.33 metres, from which 86 samples of halved core were collected and sent for analysis to Bureau Veritas Mineral Laboratories, located in Vancouver, B.C..

The software listed below was used in the field and the writing of this report.

- ArcGIS 10.4
- Geospark Core 1.1
- Leapfrog Geo 4.5.1
- Microsoft Office 2010

## 2019 Sampling and Logging

Logging and sampling of all drill core was undertaken by Braveheart geologist and a contract geologist. All cutting, moving, and sorting core boxes was also undertaken by a Braveheart employee and was supervised by above mentioned geologists. Sampling included collecting 151 samples, including standards and blanks, from eleven drillholes, which were sent to Bureau Veritas Labs, in Vancouver, for analysis.

Samples were selected by the logging geologist with uniquely numbered core tags stapled to the core box. Logging was done directly into the geological logging program, Geospark. Sampling was also continued into at least 0.5m of the footwall and hanging wall of the mineralized zones.

Drill core selected for sampling was halved longitudinally, using a diamond saw, as laid out by the logging geologist. The core was cut, but not sampled, by a Braveheart employee. Both halves of the core were returned to the core box and sampling was done by the logging geologist. One half of the core was placed in a plastic sample bag along with a tag that matched the one affixed to the core box. The sample bag was closed using a “zap strap” plastic tie. Samples were then placed into a labelled rice bag that was closed using a “zap strap” and further secured with a security tag labelled with a unique tag number. Samples were stored in the core facility on the Bull River mine site, until a sufficient number were accumulated for shipping to the laboratory via local commercial carrier, Manitoulin Transport. The remaining core was returned to the racks, in an orderly manner, for future reference and sampling. The core is stored at the mine site.

A comprehensive quality assurance/quality control program is in place to monitor precision and accuracy of assay results. Drill core samples from the property were shipped to Bureau Veritas Laboratories in Vancouver BC, for analysis. Samples represent ½ NQ core and include a commercial reference standard (three different CRM were used), and a blank, with each set of twenty to twenty-five samples.

Sample preparation involved crushing the total sample and splitting and pulverizing a 250g subsample to pass 200 mesh (Bureau Veritas codes PRP70-250 and PULSW). Gold was determined by fire assay fusion by ICP-ES using a 30g subsample (Bureau Veritas code FA330-Au). A four acid digestion and ICP-ES analysis

was completed for copper, silver and 24 additional elements using a 0.5g sub-sample (Bureau Veritas code MA370), while a 1:1:1 aqua regia digestion and ICP-MS was completed for 36 element additional elements using a 0.5g sub-sample (Bureau Veritas codes AQ200 and MA200)



## 2019 Exploration Results and Recommendations

### G Zone Results

Three relatively flat holes (GZ-19-01,02,03) were collared to test for downdip extensions of presumed stopes as seen on historical drift plan maps. They were unsuccessful in intersecting any mineralized vein structure.

Holes GZ-19-04 and 05 were collared on the road in front of the upper 'G' zone portal and drilled to test the structure underneath the estimated location of an historical trench that had reportedly intersected massive sulphides.

Only one hole (GZ-19-04) definitively intersected the target structure. The zone was intersected at 33.4m downhole for approximately 10cm. Vein contacts were not discernible due to rubble. The vein consisted of solid sulphide, mostly galena with some brown sphalerite and minor pyrite. The galena had the appearance of 'steel' galena (which is usually an indicator of high silver content).

A second hole (GZ-19-05) was drilled to test the structure found in GZ-19-04 downdip but failed to hit.

A final hole (GZ-19-06) was collared in the same general area as GZ-19-04,05 but drilled toward the adit to test for the mineralized structure slightly into the adit and downdip of it. This hole failed to intersect the 'G' zone structure.

***Table 3 – Summary of G Zone Drill Program Intercepts***

Hole ID	From (m)	To (m)	Width (m)*	Sample ID	Ag (ppm)	Pb (%)	Zn (%)
<b>GZ-19-01</b>	n/a	n/a	n/a				
<b>GZ-19-02</b>	n/a	n/a	n/a				
<b>GZ-19-04</b>	33.40	33.50	0.10	0027204	669.00	10.00	1.74
	33.50	33.65	0.15	0027205	35.00	3.47	0.33
<b>GZ-19-05</b>	n/a	n/a	n/a				
<b>GZ-19-06</b>	n/a	n/a	n/a				

\* Core length

## G Zone Recommendations

Despite intersecting the targeted structure in hole GZ-19-04, the results could not be duplicated in the other drillholes and a definitive orientation of the structure could not be determined, indicating that the structure may be presented in discontinuous pods, rather than a continuous structure.

Additional work recommended to advance the G Zone are listed below, and are not limited to:

- Detailed research and compilation of all existing historic data from the property resulting in a comprehensive database which future exploration programs can be designed and implemented as budget allows.
- Detailed field mapping of area around the G Zone adit to attempt to delineate any alteration package associated with the structure.
- An examination, including sampling and detailed mapping of the exposed vein in the “Lower G Zone” adit to help determine orientation of deposits similar to the “Upper G Zone” in the area.
- Opening of the G Zone adit for a program of sampling and mapping any visible mineralized structure.

## Rex Zone Results

Due to permitting restrictions initial holes were drilled in less than optimal locations, quite distant from known showings located in the nearby quarry and historical shaft. Despite this, several holes intersected significant core lengths of strong siderite-quartz-pyrrhotite veining with minor chalcopyrite. Veining exists principally as sheeted veins and some stockwork. Pyrrhotite is the dominant species with subordinate pyrite and minor chalcopyrite. The vein zones are accompanied by sericite +/- chlorite alteration. Thus, vein zones represent both a structural and hydrothermal corridor. Despite intersecting significant zones of mineralized structure, the drilling did not produce any economical copper grades or replicate the copper grades achieved in the 2018 field surface rock sampling program, located in the nearby quarry and historical shaft area.

Hole RX-19-01 was collared to test for veining at depth below veining seen in the gravel pit. Three zones (two large) of veining were intersected:

- 66.85m - 69.05m - small zone of moderate sheeted siderite-qtz-po veining; no chalcopyrite

- 103.85m - 139.70m - Interval characterized by weak to strong siderite-qtz+/-po,py(cpy) veining; veining largely manifests itself as sheeted veining but includes more irregular vein replacements and locally some weakly ptymatic veins; overall cpy content very low.
- 151.62m - 164.10m - second broad interval of SIQS veining; interval includes two massive veins of coarse-grained quartz, siderite with variable pyrrhotite; overall cpy content low.

Hole RX-19-02 was collared to test for mineralized veining at depth below known surface showings to the southeast, and further south than RX-19-01. Significant zones of veining were seen as noted below:

- 138.45m – 155.0m - broad zone of siderite-qtz +/- pyrrhotite-pyrite (cpy) veining accompanied by strong wallrock bleaching. The subinterval of 140.50m - 144.50m contained the strongest veining flanked by zones of more or less sheeted veining decreasing in intensity to outer limits of the zone; overall cpy content very low with best estimated chalcopyrite content of 0.3% from 140.50m to 144.50m.
- 194.95 - 199.75 - strong quartz +/-po veining and siderite-qtz veining.
- 210.15 - 211.3 - white coarse grained qtz-siderite +/- po vein.

Hole RX-19-03 was collared to test the up-dip potential of veining and mineralization seen in RX-19-02. Several zones of siderite-qtz-sulphide veining were intersected as noted with overall trace to low amounts of chalcopyrite:

- 76.60m - 82.15m - Interval of moderate qtz-siderite-pyrrhotite-pyrite veining.
- 132.05m - 175.05m - Zone of semi-continuous siderite-qtz-pyrrhotite-pyrite +/- chalcopyrite veining in the form of sheeted veining weak stockwork and massive large veins; locally veins contain small amounts of chalcopyrite; interval includes several sections of poorly veined sediments; the host siltstones are more weakly laminated which may be in part due to alteration; rocks are bleached to a paler grey to grey/green (sericitized)
- 182.90m - 185.80m - Interval with strong (12%) sheeted siderite-qtz-sulphide veins

Hole RX-19-04 was collared to target a magnetic anomaly to the southwest. The hole cut a monotonous sequence of siltstones and argillites mineralized with disseminated, blebby pyrrhotite and lesser pyrite; no veining of importance was intersected. No samples were taken in this hole.

Hole RX-19-05 was collared to test the known 'REX' zone further to the north than previous holes; Generally, the hole was poorly mineralized, but did intersect two zones of variable siderite-quartz-pyrrhotite veining as noted:

108.00m - 123.20m - Broad zone of generally weak SIQS veining; veins don't have a strong sheeted appearance as seen elsewhere; orientations are more irregular, locally weakly pygmatic, strongest subinterval of veining between 115.10m and 117.40m;

162.75m - 165.20m - Strong zone of veining comprised primarily of SIQS veining; some narrow (1-2mm) veinlets of mostly light grey quartz +/- po; zone altered in part to pale green chlorite/sericite.

***Table 4 – Summary of Rex Zone Drill Program Intercepts***

Hole ID	From (m)	To (m)	Width (m)*	Cu (%)
<b>RX-19-01</b>	109.90	136.80	26.90	0.007
	151.62	162.50	10.88	0.006
<b>RX-19-02</b>	138.45	146.50	8.05	0.013
	194.95	199.75	4.80	0.02
	210.15	211.30	1.15	0.005
<b>RX-19-03</b>	76.60	82.11	5.51	N/A
	132.05	175.05	43.00	0.01
	182.90	185.80	2.90	0.005
<b>RX-19-04</b>	n/a	n/a	n/a	
<b>RX-19-05</b>	108.00	123.20	15.20	0.011
	162.75	165.20	2.45	0.014
* Core length				

### Rex Zone Recommendations

Overall, the Rex Zone is regarded as a prospective exploration target, and given its proximity to other copper-silver-gold bearing vein systems such as the Empire located approximately 3.0 km along strike of the vein system to the east there appears to be opportunity to discover additional zones of mineralization. Future work is recommended for the area given the remarkable similarities that these vein systems have with the Bull River Mine geology.

Additional work recommended to advance the Rex Zone are listed below, and are not limited to:

- A follow up drill program with a drill pad location in closer proximity to the quarry, which was mapped and sampled in the 2018 field program and a drill pad in closer proximity to the small shaft that was also sampled in the 2018 field program.

- Additional drilling to the east and west of the quarry, targeting geophysical targets identified in the 2018 field program, which are along strike of the above-mentioned Empire vein system.

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## Appendix I - Statement of Qualifications

CERTIFICATE OF QUALIFICATIONS: Jillian Christmann

I Jillian Christmann, Geologist, Braveheart Resources Inc. hereby certify that:

1. This certificate applies to the assessment report titled Technical Report for the Bull River Mine Property – Rex and G Zone Claims Report, pursuant to Records of Work filed with the BC Mineral Titles Office on 18 June 2019.
2. I am an employee of Braveheart Resources Inc and work as a geologist.
3. That I graduated as a geologist from the University of Saskatchewan, Saskatoon, Saskatchewan, with a degree of Bachelor of Science with Honours in 2006.
4. That I have been involved in the mining and mineral industry with work on grassroots exploration projects through to mining projects since my graduation in 2006.
5. I have been employed by both junior and major companies in Canada and Chile.
5. That I am familiar with the subject area from personal fieldwork and that I personally wrote and supervised the preparation of this report.

Dated this 15th day of June, 2020; in Cranbrook, British Columbia.

 Jillian Christmann, B.Sc.Hons.



## **Appendix II - Statement of Expenditures**

Cost Statement (G-Zone/REX Drilling Program)					
Personnel	Position, (List Actual Days)	Day Rate	Days	Subtotal	Totals
Jill Christmann	Project Geologist, (July 20 - August 8, August 12 - August 14)	\$516.50	23.0	\$11,879.50	
Bernhart Augsten P.Geo.	Consulting Geologist, (July 23 - August 6, August 20 - September 3)			\$18,611.52	
Kurtis Christmann	Field Technician, ((July 21 - August 1, August 8 - 22, August 29 - Sept. 3)	\$200.00	33.0	\$6,600.00	
				\$37,091.02	<b>\$37,091.02</b>
<b>Office Studies</b>		<b>Day Rate</b>	<b>Days</b>	<b>Subtotal</b>	
Assessment Report	Jill Christmann	\$516.50	5.0	\$2,582.50	
GIS/Map Preparation	Tim Hewison	\$370.00	3.0	\$1,110.00	
				\$3,692.50	<b>\$3,692.50</b>
<b>Diamond Drilling</b>	<b>Description</b>			<b>Subtotal</b>	
Pacific Rock Works	Project Manager/Building Pads/Road Maintenance	\$416.67	26.0	\$10,833.42	
Quinton Smith	Equipment Operator	\$250.00	12.0	\$3,000.00	
Lucky Drilling	11 Diamond Drill holes (NQ2), (GZ-19-01 -GZ-19-06), (RX-19-01 -RX-19-05)			\$181,912.30	
				\$195,745.72	<b>\$195,745.72</b>
<b>Meals/Accomodations</b>				<b>Subtotal</b>	
Amanda Shingar	Cooking/Accomodations			\$10,980.00	
				\$10,980.00	<b>\$10,980.00</b>
<b>Machinery &amp; Equipment</b>		<b>Rate</b>		<b>Subtotal</b>	
D7 Caterpillar	Per hour	\$250.00	50.0	\$12,500.00	
Skid Steer	Daily Rate	\$300.00	3.3	\$975.00	
4x4 Pick up Trucks	4 Pick-up Trucks/\$100 per unit/per day	\$100.00	82.0	\$8,200.00	
Hitachi 300EX	Per hour	\$175.00	12.0	\$2,100.00	
Champion 740 Grader	Per hour	\$125.00	20.0	\$2,500.00	
				\$26,275.00	<b>\$26,275.00</b>
<b>Geological Supplies</b>				<b>Subtotal</b>	
Miscellaneous	Sample Bags, Tag Books, Safety Supplies, etc			\$366.57	
				\$366.57	<b>\$366.57</b>
<b>Ancillary Expenses</b>				<b>Subtotal</b>	
Travel (Jill Christmann)	Travel from Moose Jaw to Galloway (August 8 and 12, 2019)			\$489.50	
				\$489.50	<b>\$489.50</b>
<b>Laboratory Analysis</b>				<b>Subtotal</b>	
Shipment #1	Bureau Veritas VAN19002348 (65 Samples) Prep, FA330-AU, MA370, AQ200			\$4,094.26	
Shipment #2	Bureau Veritas VAN19002573 (9 Samples) Prep, FA330-AU, MA370, MA200			\$1,138.28	
Shipment #3	Bureau Veritas VAN19002638 (61 Samples) Prep, FA330-AU, MA370, MA200			\$3,895.80	
Shipment #4	Bureau Veritas VAN19002638 (17 Samples) Prep, FA330-AU, MA370, MA200			\$1,086.66	
Sample Shipments	Manitoulin Transport			\$339.60	
				\$10,554.60	<b>\$10,554.60</b>
<b>Total Expenditures</b>					<b>\$285,194.91</b>

## Appendix III - Sample List

### G Zone Sample List

HOLE_ID	SAMPLE_ID	FROM (m)	TO (m)	LENGTH (m)	SAMPLE TYPE
GZ-19-01	0027161	16.00	17.40	1.40	HCORE
GZ-19-01	0027162	17.40	18.00	0.60	HCORE
GZ-19-01	0027163	18.00	19.00	1.00	HCORE
GZ-19-01	0027164	19.00	20.00	1.00	HCORE
GZ-19-01	0027165	20.00	21.10	1.10	HCORE
GZ-19-01	0027166	21.10	22.00	0.90	HCORE
GZ-19-01	0027167	22.00	23.00	1.00	HCORE
GZ-19-01	0027168	23.00	24.00	1.00	HCORE
GZ-19-01	0027169	24.00	25.00	1.00	HCORE
GZ-19-01	0027170	0.00	0.00	0.00	STND 1709
GZ-19-01	0027171	25.00	26.00	1.00	HCORE
GZ-19-01	0027172	26.00	27.00	1.00	HCORE
GZ-19-01	0027173	27.00	28.00	1.00	HCORE
GZ-19-01	0027174	28.00	29.00	1.00	HCORE
GZ-19-01	0027175	29.00	30.00	1.00	HCORE
GZ-19-01	0027176	30.00	31.00	1.00	HCORE
GZ-19-01	0027177	31.00	32.50	1.50	HCORE
GZ-19-01	0027178	32.50	33.70	1.20	HCORE
GZ-19-01	0027179	33.70	34.40	0.70	HCORE
GZ-19-01	0027180	0.00	0.00	0.00	BLANK
GZ-19-01	0027181	34.40	36.00	1.60	HCORE
GZ-19-01	0027182	36.00	38.00	2.00	HCORE
GZ-19-01	0027183	38.00	39.50	1.50	HCORE
GZ-19-01	0027184	39.50	41.00	1.50	HCORE
GZ-19-01	0027185	41.00	42.50	1.50	HCORE
GZ-19-01	0027186	42.50	44.00	1.50	HCORE
GZ-19-01	0027187	44.00	45.50	1.50	HCORE
GZ-19-01	0027188	45.50	48.50	3.00	HCORE
GZ-19-01	0027189	48.50	50.00	1.50	HCORE
GZ-19-01	0027190	0.00	0.00	0.00	STND 1709
GZ-19-01	0027191	50.00	51.50	1.50	HCORE
GZ-19-01	0027192	51.50	53.00	1.50	HCORE
GZ-19-01	0027193	53.00	54.56	1.56	HCORE
GZ-19-01	0027194	54.56	56.00	1.44	HCORE
GZ-19-02	0027195	1.22	3.96	2.74	HCORE
GZ-19-02	0027196	3.96	7.00	3.04	HCORE
GZ-19-02	0027197	36.00	36.95	0.95	HCORE
GZ-19-02	0027198	36.95	38.00	1.05	HCORE
GZ-19-02	0027199	38.00	39.25	1.25	HCORE
GZ-19-02	0027200	0.00	0.00	0.00	BLANK

<b>GZ-19-02</b>	0027201	39.25	40.00	0.75	HCORE
<b>GZ-19-02</b>	0027202	43.59	43.95	0.36	HCORE
<b>GZ-19-04</b>	0027203	32.00	33.40	1.40	HCORE
<b>GZ-19-04</b>	0027204	33.40	33.50	0.10	HCORE
<b>GZ-19-04</b>	0027205	33.50	33.65	0.15	HCORE
<b>GZ-19-04</b>	0027206	33.65	36.27	2.62	HCORE
<b>GZ-19-05</b>	0027207	22.00	23.25	1.25	HCORE
<b>GZ-19-05</b>	0027208	23.25	24.40	1.15	HCORE
<b>GZ-19-05</b>	0027209	24.40	26.00	1.60	HCORE
<b>GZ-19-05</b>	0027210	0.00	0.00	0.00	STND 1410
<b>GZ-19-05</b>	0027211	26.00	27.50	1.50	HCORE
<b>GZ-19-05</b>	0027212	27.50	28.85	1.35	HCORE
<b>GZ-19-05</b>	0027213	28.85	29.50	0.65	HCORE
<b>GZ-19-05</b>	0027214	29.50	31.25	1.75	HCORE
<b>GZ-19-05</b>	0027215	31.25	32.80	1.55	HCORE
<b>GZ-19-05</b>	0027216	32.80	34.10	1.30	HCORE
<b>GZ-19-05</b>	0027217	34.10	35.05	0.95	HCORE
<b>GZ-19-05</b>	0027218	35.05	36.00	0.95	HCORE
<b>GZ-19-05</b>	0027219	50.40	50.70	0.30	HCORE
<b>GZ-19-06</b>	0027220	44.00	45.20	1.20	HCORE
<b>GZ-19-06</b>	0027221	0.00	0.00	0.00	BLANK
<b>GZ-19-06</b>	0027222	45.20	46.30	1.10	HCORE
<b>GZ-19-06</b>	0027223	46.30	47.00	0.70	HCORE
<b>GZ-19-06</b>	0027224	47.00	48.00	1.00	HCORE
<b>GZ-19-06</b>	0027225	48.00	49.00	1.00	HCORE

**Rex Zone Sample List**

HOLE_ID	SAMPLE_ID	FROM (m)	TO (m)	LENGTH (m)	SAMPLE TYPE
RX-19-01	0027287	109.90	111.25	1.35	HCORE
RX-19-01	0027288	111.25	113.00	1.75	HCORE
RX-19-01	0027289	113.00	114.50	1.50	HCORE
RX-19-01	0027290	114.50	115.85	1.35	HCORE
RX-19-01	0027291	115.85	117.15	1.30	HCORE
RX-19-01	0027292	117.15	118.80	1.65	HCORE
RX-19-01	0027293	0.00	0.00	0.00	BLANK
RX-19-01	0027294	118.80	120.40	1.60	HCORE
RX-19-01	0027295	120.40	121.75	1.35	HCORE
RX-19-01	0027296	121.75	122.50	0.75	HCORE
RX-19-01	0027297	126.25	128.00	1.75	HCORE
RX-19-01	0027298	128.00	130.00	2.00	HCORE
RX-19-01	0027299	130.00	131.00	1.00	HCORE
RX-19-01	0027300	131.00	132.15	1.15	HCORE
RX-19-01	0035251	132.15	134.00	1.85	HCORE
RX-19-01	0035252	134.00	135.85	1.85	HCORE
RX-19-01	0035253	135.85	136.80	0.95	HCORE
RX-19-01	0035254	151.62	153.33	1.71	HCORE
RX-19-01	0035255	0.00	0.00	0.00	STND 1709
RX-19-01	0035256	153.33	153.72	0.39	HCORE
RX-19-01	0035257	153.72	155.75	2.03	HCORE
RX-19-01	0035258	155.75	157.75	2.00	HCORE
RX-19-01	0035259	157.75	158.85	1.10	HCORE
RX-19-01	0035260	158.85	160.50	1.65	HCORE
RX-19-01	0035261	160.50	162.50	2.00	HCORE
RX-19-02	0027264	138.45	139.60	1.15	HCORE
RX-19-02	0027265	0.00	0.00	0.00	STND 1709
RX-19-02	0027266	139.60	140.50	0.90	HCORE
RX-19-02	0027267	140.50	141.50	1.00	HCORE
RX-19-02	0027268	141.50	142.50	1.00	HCORE
RX-19-02	0027269	142.50	143.50	1.00	HCORE
RX-19-02	0027270	143.50	144.50	1.00	HCORE
RX-19-02	0027271	144.50	146.50	2.00	HCORE
RX-19-02	0027272	183.25	185.10	1.85	HCORE
RX-19-02	0027273			0.00	BLANK
RX-19-02	0027274	194.95	196.00	1.05	HCORE
RX-19-02	0027275	196.00	197.00	1.00	HCORE
RX-19-02	0027276	197.00	198.20	1.20	HCORE
RX-19-02	0027277	198.20	199.75	1.55	HCORE
RX-19-02	0027278	203.80	204.80	1.00	HCORE
RX-19-02	0027279	210.15	211.30	1.15	HCORE
RX-19-02	0027280	211.30	213.00	1.70	HCORE

RX-19-02	0027281	213.00	215.00	2.00	HCORE
RX-19-02	0027282	215.00	217.00	2.00	HCORE
RX-19-02	0027283	221.20	223.00	1.80	HCORE
RX-19-02	0027284	223.00	224.50	1.50	HCORE
RX-19-02	0027285			0.00	STND 1709
RX-19-02	0027286	224.50	225.75	1.25	HCORE
RX-19-03	0027234	132.05	134.00	1.95	HCORE
RX-19-03	0027235	134.00	136.00	2.00	HCORE
RX-19-03	0027236	136.00	138.00	2.00	HCORE
RX-19-03	0027237	138.00	140.00	2.00	HCORE
RX-19-03	0027238	140.00	142.00	2.00	HCORE
RX-19-03	0027239	142.00	144.00	2.00	HCORE
RX-19-03	0027240	144.00	146.00	2.00	HCORE
RX-19-03	0027241	146.00	148.00	2.00	HCORE
RX-19-03	0027242	148.00	149.00	1.00	HCORE
RX-19-03	0027243	149.00	150.67	1.67	HCORE
RX-19-03	0027244	0.00	0.00	0.00	STND 1709
RX-19-03	0027245	150.67	152.00	1.33	HCORE
RX-19-03	0027246	152.00	154.00	2.00	HCORE
RX-19-03	0027247	154.00	155.10	1.10	HCORE
RX-19-03	0027248	155.10	156.55	1.45	HCORE
RX-19-03	0027249	156.55	158.50	1.95	HCORE
RX-19-03	0027250	158.50	160.50	2.00	HCORE
RX-19-03	0027251	160.5	162.5	2.00	HCORE
RX-19-03	0027252	162.50	163.50	1.00	HCORE
RX-19-03	0027253			0.00	BLANK
RX-19-03	0027254	163.50	164.50	1.00	HCORE
RX-19-03	0027255	164.50	165.50	1.00	HCORE
RX-19-03	0027256	165.50	167.50	2.00	HCORE
RX-19-03	0027257	167.50	169.50	2.00	HCORE
RX-19-03	0027258	169.50	172.05	2.55	HCORE
RX-19-03	0027259	172.05	172.40	0.35	HCORE
RX-19-03	0027260	172.40	174.00	1.60	HCORE
RX-19-03	0027261	174.00	175.05	1.05	HCORE
RX-19-03	0027262	182.90	184.50	1.60	HCORE
RX-19-03	0027263	184.50	185.80	1.30	HCORE
RX-19-05	0035262	67.75	68.20	0.45	HCORE
RX-19-05	0035264	68.20	70.00	1.80	HCORE
RX-19-05	0035265	70.00	71.30	1.30	HCORE
RX-19-05	0035266	71.30	72.65	1.35	HCORE
RX-19-05	0035267	115.10	116.00	0.90	HCORE
RX-19-05	0035268	116.00	117.40	1.40	HCORE
RX-19-05	0035269	162.75	164.00	1.25	HCORE
RX-19-05	0035270	164.00	165.20	1.20	HCORE

## Appendix IV – Drillhole Information

### G Zone Collar Data

HOLE_ID	UTM Easting	UTM Northing	Elev (m)	EOH (m)	LOCATION
GZ-19-01	626056	5477894	1211	94.79	GZ Drill Pad 1
GZ-19-02	626056	5477894	1211	115.37	GZ Drill Pad 1
GZ-19-03	626056	5477894	1211	91.52	GZ Drill Pad 1
GZ-19-04	626014	5477937	1211	60.66	GZ Drill Pad 2
GZ-19-05	626014	5477937	1211	62.48	GZ Drill Pad 2
GZ-19-06	626014	5477937	1211	76.20	GZ Drill Pad 2

### G Zone Down Hole Survey Data

HOLE_ID	DEPTH (m)	AZIMUTH	DIP	MAG	HOLE SIZE
<b>GZ-19-01</b>	0.00	345.00	-20.00	55126	NQ2
	8.84	347.50	-20.80	55814	NQ2
	39.32	348.30	-20.80	55355	NQ2
	69.80	348.30	-20.90	55292	NQ2
	91.13	350.00	-20.70	55968	NQ2
<b>GZ-19-02</b>	0.00	345.00	-30.00	55126	NQ2
	10.06	348.50	-31.10	55637	NQ2
	71.01	350.00	-32.20	55400	NQ2
	89.30	351.70	-32.20	56192	NQ2
<b>GZ-19-03</b>	0.00	340.00	-15.00	55126	NQ2
	42.37	345.30	-16.40	56116	NQ2
	75.89	343.40	-16.00	55446	NQ2
	91.44	344.00	-16.00	55951	NQ2
<b>GZ-19-04</b>	0.00	346.00	-35.00	55126	NQ2
	60.65	344.30	-35.20	55890	NQ2
<b>GZ-19-05</b>	0.00	346.00	-50.00	55126	NQ2
	10.67	343.00	-49.90	57029	NQ2
	22.86	344.20	-49.50	55698	NQ2
	62.48	345.30	-49.90	56062	NQ2
	0.00	360.00	-25.00	55126	NQ2
	24.38	356.50	-25.30	55473	NQ2
	60.96	358.90	-24.80	55493	NQ2

### Rex Zone Collar Data

HOLE_ID	UTM Easting	UTM Northing	Elev (m)	EOH (m)	LOCATION
RX-19-01	627993	5474286	947	208.48	Drill Pad 1
RX-19-02	627993	5474286	947	229.82	Drill Pad 1
RX-19-03	627993	5474286	947	244.75	Drill Pad 1
RX-19-04	627987	5474282	947	252.98	Drill Pad 1
RX-19-05	627990	5474282	947	260.30	Drill Pad 1

### Rex Zone Down Hole Survey Data

HOLE_ID	DEPTH (m)	AZIMUTH	DIP	MAG	HOLE SIZE
RX-19-01	0.00	134.00	-43.00	55126	NQ2
	25.60	139.10	-42.40	55726	NQ2
	132.28	139.70	-44.20	55656	NQ2
	159.71	356.00	-45.20	35961	NQ2
	208.47	139.20	-44.30	54484	NQ2
RX-19-02	0.00	160.00	-43.00	55126	NQ2
	19.51	158.70	-43.60	55194	NQ2
	77.42	156.50	-43.80	55425	NQ2
	107.89	157.90	-43.80	55775	NQ2
	190.19	159.00	-43.80	55682	NQ2
RX-19-03	0.00	160.00	-25.00	55126	NQ2
	16.46	155.90	-24.90	55339	NQ2
	46.63	149.80	-23.60	55522	NQ2
	77.11	155.30	-26.20	55397	NQ2
	107.59	158.60	-27.20	56273	NQ2
	138.37	158.00	-27.00	56146	NQ2
RX-19-04	0.00	242.00	-35.00	55126	NQ2
	7.01	243.70	-34.70	55353	NQ2
	67.97	245.00	-34.70	55377	NQ2
	128.92	246.90	-34.70	55354	NQ2
	189.88	248.00	-34.80	55358	NQ2
RX-19-05	0.00	110.00	-35.00	55126	NQ2
	16.46	94.10	-34.60	55463	NQ2
	46.94	95.80	-34.70	55739	NQ2
	77.42	97.50	-34.70	54863	NQ2
	107.89	95.90	-35.00	55362	NQ2
	138.37	97.60	-35.00	55457	NQ2
	168.85	98.40	-35.20	55361	NQ2
	199.33	99.30	-35.30	55021	NQ2
	229.81	100.30	-35.60	55288	NQ2
	260.29	99.30	-35.50	57257	NQ2



## Appendix V – Drillhole Logs

**Project:** Bull River

**Hole:** GZ-19-01

<b>Prospect:</b>	G ZONE	<b>Survey Type:</b>	GPS	<b>Logged By:</b>	Bernie Augsten	<b>Hole Type:</b>	DD
<b>UTM Grid:</b>	NAD83_Z11	<b>Survey By:</b>	Jill Christmann	<b>Date Started:</b>	2019-07-24	<b>Hole Diameter:</b>	7.57
<b>UTM East:</b>	626056	<b>Azimuth:</b>	345	<b>Date Completed:</b>	2019-07-26	<b>Core Size:</b>	NQ
<b>UTM North:</b>	5477894	<b>Dip:</b>	-20	<b>Drill Company:</b>	Lucky	<b>Casing Pulled?:</b>	<input checked="" type="checkbox"/>
<b>UTM Elevation (m):</b>	1211	<b>Length (m):</b>	94.79	<b>Drill Rig:</b>	Rig1	<b>Casing Depth (m):</b>	3.05
<b>Local Grid:</b>				<b>Drill Started:</b>	2019-07-20	<b>Reduced (m):</b>	
<b>Local East:</b>				<b>Drill Completed:</b>	2019-07-21	<b>Reduced Size:</b>	
<b>Local North:</b>						<b>Oriented?:</b>	<input type="checkbox"/>
<b>Local Elevation (m):</b>		<b>Comments:</b>	Hole was collared test for the G zone 'vein' below the upper adit. The hole was unsuccessful in intersecting any massive galena mineralization but did encounter a bedding parallel fault or faults with disrupted qtz veinlets and some pyrite; qtz veinlets are commonly vuggy with limonite in vugs;				
<b>Hole Status:</b>	Completed						
<b>Hole Purpose:</b>	EXPL						

Depth (m)	Survey Method	Survey By	Date Surveyed	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Mag. Field	Accept Values?	Comments
8.8	EZShot	Jeff	2019-07-20	-20.8	333.4	14.1	347.5	55814	<input checked="" type="checkbox"/>	
39.3	EZShot	Jeff	2019-07-20	-20.8	334.2	14.1	348.3	55355	<input checked="" type="checkbox"/>	
69.8	EZShot	Jeff	2019-07-20	-20.9	334.2	14.1	348.3	55292	<input checked="" type="checkbox"/>	
91.1	EZShot	Jeff	2019-07-21	-20.7	335.9	14.1	350	55968	<input checked="" type="checkbox"/>	



# GeoSpark: Drill Hole Report

Hole: GZ-19-01

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	Au Best ppb	Ag Best ppm	Cu Best pct	Pb Best pct	Zn Best pct
<b>0.00</b>	<b>1.22</b>	<b>OVB Overburden</b>									
Essentially no overburden; hole collared into outcrop at side of old road; <<Min: 1.2 - 17.4: 0.5% pyrite>> Rock is oxidized; original pyrite content likely higher; see narrow seams of limonite parallel to bedding; <<Struc: 1.2 - 17.4: strong Finely laminated/laminated/finely bedded 7 deg. >>											
<b>1.22</b>	<b>21.10</b>	<b>ARGL_SD Argillite with very fine laminations producing a striped appearance</b>	<b>dark grey</b>	<b>FG</b>							
Finely laminated argillite characterized by a somewhat 'striped' appearance manifested by narrow, generally <.5mm bedding parallel seams of white to light grey quartz. Less commonly the stratigraphy includes narrow (1-2mm), largely oxidized (to limonite), bedding parallel seams of pyrite; lower end of interval may include part of the underlying unit but part of the intense fault;											
17.4 - 21.1 - FAULT; fault transitions into the lower veined/faulted argillite unit; <<Min: 17.4 - 21.1: 0.1% pyrite>> Fault is partially oxidized; original pyrite content may have been higher; <<Struc: 17.4 - 21.1: intense Fault 3 deg. >> Narrow, low angle fault; rock completely milled and reduced to finely milled rock, and gouge; Interval marks the start and finish of the low angle faulting. Fault transitions into veined, oxidized argillite (see lithology). Approximate true width of fault is 0.2m;											
			16.00	17.40	1.40	0027161	7	1	0.004	0.01	0.01
			17.40	18.00	0.60	0027162	12	1	0.008	0.01	0.02
			18.00	19.00	1.00	0027163	7	1	0.007	0.01	0.01
			19.00	20.00	1.00	0027164	11	1	0.005	0.01	0.01
			20.00	21.10	1.10	0027165	6	1	0.006	0.03	0.01
			21.10	22.00	0.90	0027166	20	1	0.019	0.04	0.04
			22.00	23.00	1.00	0027167	19	1	0.025	0.04	0.04
<b>21.10</b>	<b>33.70</b>	<b>ARGL_QV Argillite with strong disrupted N qtz veining; veining conformable to bedding</b>	<b>grey</b>	<b>FG</b>							
Interval of deformed, veined argillite containing relatively large % of narrow qtz veinlets - mostly conformable to bedding/foliation with some cross-cutting veinlets; rock mass may have been a preexisting fault; veins are strongly oxidized resulting in limonitic vugs with rare visible pyrite; <<Min: 21.1 - 33.7: 0.1% pyrite>> Interval moderately to strongly oxidized to limonite; limonitic vugs in qtz veinlets indicate originally higher pyrite content; <<Vein: 21.1 - 33.7: 12% Quartz>>											
			23.00	24.00	1.00	0027168	9	1	0.014	0.04	0.02
			24.00	25.00	1.00	0027169	8	1	0.007	0.04	0.03



## GeoSpark: Drill Hole Report

Hole: GZ-19-01

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	Au Best ppb	Ag Best ppm	Cu Best pct	Pb Best pct	Zn Best pct
<<Struc: 21.1 - 33.7: strong Veining - fracture fill 0 deg. >> Generally strongly veined, disrupted zone with overall qtz veining parallel to core axis;			25.00	26.00	1.00	0027171	11	1	0.005	0.04	0.02
			26.00	27.00	1.00	0027172	13	1	0.01	0.05	0.02
			27.00	28.00	1.00	0027173	14	1	0.006	0.07	0.02
			28.00	29.00	1.00	0027174	9	1	0.003	0.03	0.01
			29.00	30.00	1.00	0027175	8	1	0.001	0.01	0.005
			30.00	31.00	1.00	0027176	6	1	0.003	0.01	0.01
			31.00	32.50	1.50	0027177	6	1	0.002	0.01	0.01
			32.50	33.70	1.20	0027178	10	1	0.006	0.01	0.02
			33.70	34.40	0.70	0027179	13	1	0.023	0.04	0.08
<b>33.70</b>	<b>38.00</b>	<b>ARGL_SD Argillite with very fine laminations producing a striped appearance</b>	<b>dark grey</b>	<b>FG</b>							
Similar finely layered 'striped' argillite as seen at top of the hole; oxidized along fxs and seams of presumably pyrite;											
<<Min: 33.7 - 38: 0.3% pyrite>> Pyrite or its oxidized equivalent occurs in seams/laminae parallel to bedding; hard to tell original amount of pyrite;											
<b>38.00</b>	<b>54.56</b>	<b>ARGL_QV Argillite with strong disrupted N qtz veining; veining conformable to bedding</b>	<b>dark grey</b>	<b>FG</b>							
Similar zone to that between 21.1 and 33.7; somewhat less oxidized; rock is comprised of many narrow, <5mm, distorted to wavy qtz veinlets generally conformable to laminations although some crosscutting veinlets are seen; veins are white qtz, commonly vuggy with limonitic cavities; veinlets comprise 10-15% of rock mass;											
This zone may represent a preexisting shear zone parallel to bedding (thrust fault?)											
<<Min: 38 - 54.56: 0.1% pyrite>> Most pyrite oxidized out of veins leaving limonite; locally see some fine grained semi-massive accumulations over 1-2cm within a disrupted quartz vein, eg. 50.4 - 50.5m;											
<<Vein: 38 - 54.56: 12% Quartz>>											
			39.50	41.00	1.50	0027184	6	1	0.003	0.01	0.02
			41.00	42.50	1.50	0027185	6	1	0.005	0.01	0.03
			42.50	44.00	1.50	0027186	7	1	0.003	0.01	0.02
			44.00	45.50	1.50	0027187	11	1	0.016	0.04	0.07
			45.50	48.50	3.00	0027188	10	1	0.008	0.01	0.03

Hole: GZ-19-01

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	Au Best ppb	Ag Best ppm	Cu Best pct	Pb Best pct	Zn Best pct
			48.50	50.00	1.50	0027189	7	1	0.006	0.03	0.03
			50.00	51.50	1.50	0027191	6	1	0.004	0.03	0.04
			51.50	53.00	1.50	0027192	5	1	0.001	0.01	0.04
			53.00	54.56	1.56	0027193	7	1	0.004	0.01	0.03
			54.56	56.00	1.44	0027194	9	1	0.007	0.01	0.05

**54.56 75.75 ARGL\_SD Argillite with very fine laminations producing a striped appearance**      **dark grey**      **FG**

Well developed limonite/manganese on oxidized bedding parallel laminae; bedding is close to parallel to core axis;  
 <<Min: 54.56 - 75.9: 1% pyrite / 0.3% pyrite>> Pyrite occurs most commonly in seams or veinlets conformable to laminations, largely oxidized;  
 However, also see larger aggregates sometimes as rounded accumulations within laminations to 2cm, and as larger aggregates (10cmx5cm) of unusual euhedral, wedge, triangular or L- shaped accumulations individually up 1cmx1cm, eg. 56.56 - 57;  
 <<Alt: 54.56 - 75.75: weak to moderate Bleaching>> See beige to pale reddish/brown bleaching as envelopes to qtz +/- py? (limonite) rich sub-mm-scale laminae in striped argillite, eg. 72.8m;  
 <<Struc: 54.56 - 75.75: strong Finely laminated/laminated/finely bedded 2 deg. >> Laminations pretty much parallel to core axis;

**75.75 94.79 SLTS Siltstone**      **light grey**      **FG**

Predominantly massive to locally very weakly bedded, light grey, hard, fine grained, quartz siltstone intercalated with a well-laminated argillite/argillaceous siltstone;  
 80.9 - 84.1 - well-laminated argillite; this argillite differs markedly from that seen earlier in the hole; here the laminations range in size from 1mm to cm scale and in colour from very light grey to black with some rustier orange seams (reflecting oxidation of pyritic seams)  
 <<Min: 75.9 - 94.79: 0.05% pyrite>>  
 <<Alt: 75.75 - 94.79: weak Limonite>>  
 <<Vein: 84.1 - 94.79: 0.3% Quartz-Kspar>> Narrow, (1-5mm), veinlets with somewhat diffuse margins consisting of light grey quartz with pale yellow/cream feldspars/sericite? Feldspars appear to crystallize from the margins inward, ie orthogonal to vein margins, eg. 87.5.  
 <<Struc: 75.75 - 76.2: intense Fault>> Fault may be larger; major core loss near the 75.9m marker; no good angles on fault; clay gouge/rubble; no visible sulphides;



## GeoSpark: Drill Hole Report

Hole: GZ-19-01

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	Au Best ppb	Ag Best ppm	Cu Best pct	Pb Best pct	Zn Best pct
		<<Struc: 80.9 - 84.1: strong Finely laminated/laminated/finely bedded 12 deg. >> Minor variations to laminations; nice fining upward sequence indicating stratigraphy right side up, (not overturned);									
		<<Struc: 90.2 - 90.25: strong Veining - fracture fill>> Broken up massive reddish (hematite+/-limonite)-qtz vein; no visible sulphides; contacts not discernible due to broken core;									

**End of Hole @ 94.79**

**Project:** Bull River

**Hole:** GZ-19-02

<b>Prospect:</b>	G ZONE	<b>Survey Type:</b>	GPS	<b>Logged By:</b>	Bernie Augsten	<b>Hole Type:</b>	DD
<b>UTM Grid:</b>	NAD83_Z11	<b>Survey By:</b>	J Christmann	<b>Date Started:</b>	2019-07-26	<b>Hole Diameter:</b>	7.57
<b>UTM East:</b>	626056	<b>Azimuth:</b>	345	<b>Date Completed:</b>	2019-07-28	<b>Core Size:</b>	NQ
<b>UTM North:</b>	5477894	<b>Dip:</b>	-30	<b>Drill Company:</b>	Lucky	<b>Casing Pulled?:</b>	<input checked="" type="checkbox"/>
<b>UTM Elevation (m):</b>	1211	<b>Length (m):</b>	115.37	<b>Drill Rig:</b>	Rig1	<b>Casing Depth (m):</b>	3.05
<b>Local Grid:</b>				<b>Drill Started:</b>	2019-07-22	<b>Reduced (m):</b>	
<b>Local East:</b>				<b>Drill Completed:</b>	2019-07-24	<b>Reduced Size:</b>	
<b>Local North:</b>						<b>Oriented?:</b>	<input type="checkbox"/>
<b>Local Elevation (m):</b>		<b>Comments:</b>	Hole GZ-19-02 was collared to test for the 'G' zone structure down dip of Hole #1; This hole failed to hit the 'G' zone mineralized structure.				
<b>Hole Status:</b>	Completed		36.95 - 39.25 - bedding parallel clay gouge fault; no associated sulphide mineralization other than perhaps some ground up pyrite that occurs in the sediments;				
<b>Hole Purpose:</b>	EXPL						

36.95 - 39.25 - bedding parallel clay gouge fault; no associated sulphide mineralization other than perhaps some ground up pyrite that occurs in the sediments;

Depth (m)	Survey Method	Survey By	Date Surveyed	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Mag. Field	Accept Values?	Comments
10.06	EZShot	Jeff	2019-07-21	-31.1	334.4	14.1	348.5	55637	<input checked="" type="checkbox"/>	
71.01	EZShot	Jeff	2019-07-22	-32.2	335.9	14.1	350	55400	<input checked="" type="checkbox"/>	
89.3	EZShot	Jeff	2019-07-23	-32.2	337.6	14.1	351.7	56192	<input checked="" type="checkbox"/>	



## GeoSpark: Drill Hole Report

Hole: GZ-19-02

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	Au Best ppb	Ag Best ppm	Cu Best pct	Pb Best pct	Zn Best pct
0.00	1.22	<b>OVB Overburden</b> Virtually no overburden; site on road cut in broken bedrock;									
			1.22	3.96	2.74	0027195	8	1	0.004	0.01	0.02
1.22	3.96	<b>ARGL_QV Argillite with strong disrupted dark grey N qtz veining; veining conformable to bedding</b> Strongly broken up core at start of hole; consists of predominantly strongly veined argillite as seen in Hole GZ-19-01 comprised of small typically 1mm or less white qtz veinlets either parallel to a contorted lamination or also seen crosscutting; veinlets are oxidized with limonite lined vugs; Interval also includes broken pieces of the finely laminated argillite seen in the top of Hole GZ-19-01. <<Min: 1.25 - 3.96: 0.05% pyrite>>									
			3.96	7.00	3.04	0027196	7	1	0.005	0.01	0.02
3.96	9.75	<b>ARGL_SD Argillite with very fine black FG laminations producing a striped appearance</b> Finely laminated (striped) argillite with mm to sub-mm scale qtz rich laminae often rimmed by limonite (oxidized) pyrite intercalated with mm scale dk grey to black argillaceous laminae; Toward lower contact grades into thicker bedded/laminated argillites; Lower contact appears gradational but difficult to discern due to badly broken core. <<Min: 3.96 - 9.75: 0.1% pyrite>> Rare pyrite as selvage to qtz-rich laminae; most pyrite oxidized.									
9.75	24.20	<b>SLTS Siltstone light grey FG</b> Fine grained, light grey, massive to poorly bedded, qtz siltstone; well-developed limonite on fxs and peripheral to fxs; includes minor dker grey better laminated argillite; Lower contact gradational into laminated argillite; <<Min: 9.75 - 24.2: 0.05% pyrite>> See rare small, euhedral L-shaped/triangular aggregates of pyrite;									
24.20	39.25	<b>ARGL Argillite dark grey FG</b> Generally a dk grey fine grained laminated argillite with brown oxidized narrow beds (1-10mm) of consisting of qtz and oxidized pyrite (similar to the striped argillite); also includes (towards lower end of interval), thin laminae (<10mm) of a very light grey siltstone reminiscent of the more massive siltstone seen higher up in the hole. 36.95 - 39.25 - FAULT; clay gouge;									
			36.00	36.95	0.95	0027197	9	1	0.006	0.01	0.01



Hole: GZ-19-02

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	Au Best ppb	Ag Best ppm	Cu Best pct	Pb Best pct	Zn Best pct
		<<Min: 24.2 - 36.95: 0.05% pyrite>> Rare visible pyrite associated with orange oxidized laminae; pyrite content preoxidation may have been quite a bit higher.	36.95	38.00	1.05	0027198	9	1	0.014	0.01	0.03
		<<Min: 36.95 - 39.25: 0.05% pyrite>>	38.00	39.25	1.25	0027199	7	1	0.004	0.01	0.01
		<<Struc: 36.95 - 39.25: intense Fault 8 deg. >> Light to dk grey clay gouge fault; parallel to laminations; partially oxidized near upper contact; no visible associated sulphides;									
		<b>39.25 115.37 SLTS Siltstone FG</b>	39.25	40.00	0.75	0027201	4	1	0.0005	0.01	0.005
		Intercalated sequence of predominantly light grey massive to weakly bedded siltstone with well-laminated light to dk grey argillite/argillaceous siltstone; the massive siltstone locally contains rip-up clasts of the finer grained black argillite; within the laminated argillaceous beds, locally see well-developed flame structures indicating right-side up tops.									
		43.59 - 43.95 - FAULT; muddy gougy fault; no good contacts; no visible sulphides;									
		<<Min: 39.25 - 115.37: 0.1% pyrite / 0.05% pyrite / 0.05% chalcopyrite / 0.05% graphite>> Rare graphite octahedra seen within the light grey massive siltstone, eg. 89.3m; Minor pyrite seen as rounded, fine grained aggregates within specific laminae up to 5x2cm but typically <1cm;	43.59	43.95	0.36	0027202	8	1	0.009	0.01	0.02
		<<Alt: 39.25 - 115.37: weak Sericitic / weak Limonite>> Limonite occurs as oxidation of fractures, and as washes peripheral to fractures; also locally see limonitic liesegang banding within the light grey more massive siltstone;									
		<<Vein: 39.25 - 115.37: 0.05% Quartz-Sulphide / 0.05% Quartz-Feldspar-Sulphide>> Rare light grey quartz-feldspar (sericite) +/- pyrite veinlets, (<1cm), with somewhat diffuse margins generally at low angles TCA;									
		<<Struc: 39.9 - 40.1: strong Finely laminated/laminated/finely bedded 17 deg. >>									
		<<Struc: 40.7 - 42.8: moderate Finely laminated/laminated/finely bedded 12 deg. >>									
		<<Struc: 53.15 - 53.2: strong Veining - fracture fill 33 deg. >> Coarse grained white quartz vein with 5% oxidized limonitic cavities; trace fg cpy, malachite, pyrite;									
		<<Struc: 54.15 - 54.35: moderate to strong Finely laminated/laminated/finely bedded 12 deg. >>									
		<<Struc: 59.8 - 62.25: moderate to strong Finely laminated/laminated/finely bedded 12 deg. >> Bedding laminations fluctuate somewhat up to 16 TCA for short intervals;									
		<<Struc: 65.4 - 66.35: strong Finely laminated/laminated/finely bedded 25 deg. >>									
		<<Struc: 71.75 - 72.25: strong Finely laminated/laminated/finely bedded 24 deg. >>									
		<<Struc: 81.3 - 87.1: moderate to strong Finely laminated/laminated/finely bedded 20 deg. >>									
		<<Struc: 94.8 - 96: weak Finely laminated/laminated/finely bedded 12 deg. >>									
		<<Struc: 97.75 - 98.65: strong Finely laminated/laminated/finely bedded 15 deg. >>									
		<<Struc: 99.5 - 101: moderate Finely laminated/laminated/finely bedded 20 deg. >>									



## GeoSpark: Drill Hole Report

Hole: GZ-19-02

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	Au Best ppb	Ag Best ppm	Cu Best pct	Pb Best pct	Zn Best pct
		<<Struc: 102 - 105.8: moderate to strong Finely laminated/laminated/finely bedded 20 deg. >>									
		<<Struc: 112 - 113.7: moderate to strong Finely laminated/laminated/finely bedded 25 deg. >>									

**End of Hole @ 115.37**



## GeoSpark: Drill Hole Report

**Project:** Bull River

**Hole:** GZ-19-03

<b>Prospect:</b>	G ZONE	<b>Survey Type:</b>	GPS	<b>Logged By:</b>	Bernie Augsten	<b>Hole Type:</b>	DD
<b>UTM Grid:</b>	NAD83_Z11	<b>Survey By:</b>	Jill Christmann	<b>Date Started:</b>	2019-08-01	<b>Hole Diameter:</b>	7.57
<b>UTM East:</b>	626056	<b>Azimuth:</b>	338	<b>Date Completed:</b>	2019-08-02	<b>Core Size:</b>	NQ
<b>UTM North:</b>	5477894	<b>Dip:</b>	-16	<b>Drill Company:</b>	Lucky	<b>Casing Pulled?:</b>	<input checked="" type="checkbox"/>
<b>UTM Elevation (m):</b>	1211	<b>Length (m):</b>	91.52	<b>Drill Rig:</b>	Rig1	<b>Casing Depth (m):</b>	
<b>Local Grid:</b>				<b>Drill Started:</b>	2019-07-24	<b>Reduced (m):</b>	
<b>Local East:</b>				<b>Drill Completed:</b>	2019-07-26	<b>Reduced Size:</b>	
<b>Local North:</b>						<b>Oriented?:</b>	<input type="checkbox"/>
<b>Local Elevation (m):</b>							
<b>Hole Status:</b>	Completed	<b>Comments:</b>					
<b>Hole Purpose:</b>	EXPL	Hole was collared in an attempt to intersect the 'G' zone structure below a stope? In the old adit. The hole did not intersect any mineralized structure.					
		The hole cut a series of sediments at very low angles to core axis (0-5). Contacts in sediments tend to be gradational and especially because of the low core angles, contacts between different sedimentary units are somewhat approximate.					

Depth (m)	Survey Method	Survey By	Date Surveyed	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Mag. Field	Accept Values?	Comments
42.37	EZShot	Jeff	2019-07-25	-16.4	331.2	14.1	345.3	56116	<input checked="" type="checkbox"/>	
75.89	EZShot	Jeff	2019-07-26	-16	329.3	14.1	343.4	55446	<input checked="" type="checkbox"/>	
91.44	EZShot	Jeff	2019-07-26	-16	329.9	14.1	344	55951	<input checked="" type="checkbox"/>	



## GeoSpark: Drill Hole Report

Hole: GZ-19-03

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	Au Best ppb	Ag Best ppm	Cu Best pct	Pb Best pct	Zn Best pct
0.00	44.60	<b>ARGL Argillite</b> grey Intercalated sequence of thinly bedded argillite and siltstone; laminae range from 1mm to 20mm; three main laminae types producing a nicely banded rock are the very fine grained dark grey to black argillite, somewhat coarser grained, light grey to cream qtz siltstone and a oxidized orange (limonitic) siltstone; Bedding/laminations are almost parallel to core axis; oxidation along bedding planes weakens the rock and contributes to poor rock quality; <<Min: 0 - 44.6: 1% pyrite>> While the rock mass is well-oxidized along certain laminae, fxs do see pyrite as med to coarse grained irregular aggregates (cm-sized) within the lighter coloured siltstone, eg. 26.8m; Original pyrite content in rock likely much higher. <<Alt: 0 - 44.6: moderate Limonite>> Oxidation of selective laminae to limonite; also patchy pervasive limonite in lt grey siltstone; <<Vein: 0 - 44.6: 0.1% Quartz-Pyrite>> Rare oxidized, vuggy quartz+/-py veinlets parallel to laminations; all pyrite oxidized; <<Struc: 0 - 29: strong Finely laminated/laminated/finely bedded 3 deg. >> <<Struc: 29 - 44.6: intense Finely laminated/laminated/finely bedded 5 deg. >>									
44.60	51.10	<b>SLTS Siltstone</b> grey FG Predominantly Massive bedded light grey qtz siltstone intercalated with dk grey very grained argillite; oxidized on fxs and locally pervasive limonite; contacts gradational; <<Min: 44.6 - 51.1: 0.3% pyrite>> <<Alt: 44.6 - 51.1: moderate Limonite / weak Sericitic>> Limonite as patchy pervasive oxidation; in parts see disseminated sericite/muscovite, eg. 50.7m; <<Struc: 44.6 - 51.1: weak to moderate Intercalated/Interbedded/Interlayered/Interfoliated 3 deg. >>									
51.10	54.40	<b>ARGL_QV Argillite with strong disrupted</b> N qtz veining; veining conformable to bedding VFG Dark grey argillite with light grey to cream quartz and quartz-siderite veining, locally distorted including some crosscutting ptymatic veinlets; most veining parallel to laminations; 3% veining; minor associated pyrite; <<Min: 51.1 - 54.4: 0.5% pyrite>> <<Vein: 51.1 - 54.4: 3% Siderite quartz sulphide (pyrrhotite+pyrite+/-chalcopyrite) / 0.3% Siderite quartz sulphide (pyrrhotite+pyrite+/-chalcopyrite)>> Rare pyrite in veins/veinlets; <<Struc: 51.1 - 54.4: moderate to strong Finely laminated/laminated/finely bedded 5 deg. >> Some variability to laminations;									



## GeoSpark: Drill Hole Report

Hole: GZ-19-03

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	Au Best ppb	Ag Best ppm	Cu Best pct	Pb Best pct	Zn Best pct
54.40	73.70	SLTS Siltstone Predominantly massive bedded fine grained siltstone; minor intercalated laminated argillite/siltstone; locally see rip-up clasts of argillite within siltstone; <<Min: 54.4 - 73.7: 0.3% pyrite>> Rare med to coarse grained, cm-scaled aggregates of pyrite, eg. 72m; <<Alt: 54.4 - 73.7: weak to moderate Limonite / weak Sericitic>> <<Struc: 54.4 - 73.7: weak to moderate Intercalated/Interbedded/Interlayered/Interfoliated 5 deg. >>									
73.70	91.52	ARGL_SD Argillite with very fine laminations producing a striped appearance Interbedded laminae of the 'striped' qtz-rich argillite and a even finer grained argillite; not really cutting thru much of a section - essentially drilling right down the same bed; generally the rock mass is a lot more carbonaceous than rocks higher up in the hole. Striped argillite more pyrite-rich as coarse diss grains and rounded blebs/small aggregates 83.8 - 84.55 - see an intraformational breccia within a 2cm thick laminae of the 'striped' argillite; manifested by densely packed small rotated blocks of laminated argillite constrained within the boundaries of the laminae; upper and lower contacts of this odd breccia are abrupt changing to undisturbed striped argillite; <<Min: 73.7 - 91.52: 1% pyrite / 0.5% pyrite / 0.3% pyrite>> Minor bedding parallel seams/veins? Of pyrite; <<Struc: 73.7 - 91.52: intense Finely laminated/laminated/finely bedded 3 deg. >> Minor variations from 0 - 3 TCA;									

End of Hole @ 91.52



## GeoSpark: Drill Hole Report

**Project:** Bull River

**Hole:** GZ-19-04

<b>Prospect:</b>	G ZONE	<b>Survey Type:</b>	GPS	<b>Logged By:</b>	Bernie Augsten	<b>Hole Type:</b>	DD
<b>UTM Grid:</b>	NAD83_Z11	<b>Survey By:</b>	Jill Christmann	<b>Date Started:</b>	2019-07-28	<b>Hole Diameter:</b>	7.57
<b>UTM East:</b>	626014	<b>Azimuth:</b>	346	<b>Date Completed:</b>	2019-07-29	<b>Core Size:</b>	NQ
<b>UTM North:</b>	5477937	<b>Dip:</b>	-38	<b>Drill Company:</b>	Lucky	<b>Casing Pulled?:</b>	<input checked="" type="checkbox"/>
<b>UTM Elevation (m):</b>	1211	<b>Length (m):</b>	60.66	<b>Drill Rig:</b>	Rig1	<b>Casing Depth (m):</b>	3.05
<b>Local Grid:</b>				<b>Drill Started:</b>	2019-07-26	<b>Reduced (m):</b>	
<b>Local East:</b>				<b>Drill Completed:</b>	2019-07-28	<b>Reduced Size:</b>	
<b>Local North:</b>						<b>Oriented?:</b>	<input type="checkbox"/>
<b>Local Elevation (m):</b>		<b>Comments:</b>	This hole was collared to test for the G Zone structure in front of the portal and beneath the reported trench from historic work.				
<b>Hole Status:</b>	Completed						
<b>Hole Purpose:</b>	EXPL		33.4 - 33.5 - GALENA VEIN; Massive fine to med grained, strained, 'steel' galena; vein broken up and contacts obscured by rubble;				

Depth (m)	Survey Method	Survey By	Date Surveyed	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Mag. Field	Accept Values?	Comments
60.65	EZShot	Jeff	2019-07-28	-35.2	330.2	14.1	344.3	55890	<input checked="" type="checkbox"/>	

Hole: GZ-19-04

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	Au Best ppb	Ag Best ppm	Cu Best pct	Pb Best pct	Zn Best pct
0.00	48.00	ARGL Argillite dark grey FG	32.00	33.40	1.40	0027203	3	1	0.002	0.03	0.07
<p>Intercalated, well-laminated argillite/siltstone; oxidized throughout and manifested by complete or near complete oxidation of specific laminations (originally pyritic?), limonite on bedding plane surfaces and as reddish/orange washes through siltier sections.</p> <p>The oxidized laminae also seem to be slightly coarser grained, and have a greater quartzo-feldspathic component w.r.t. the very fine grained dark grey to black argillaceous beds/laminae.</p> <p>Rock quality poor due to weakness along bedding planes principally due to oxidation. Bedding variable from 10-20 TCA;</p> <p>33.4 - 33.5 - Massive galena vein; (See Structures);</p> <p>33.5 - 33.65 - FAULT; gougy rubbly fault (See Structures); forms the hangingwall portion of the vein but angular relationships unknown due to rubble;</p> <p>42 - 48 - argillite becomes much more carbonaceous with only very minor intercalated narrow beds of lighter grey siltstone; contacts gradational in and out of this unit;</p> <p>&lt;&lt;Min: 33.4 - 33.5: 95% galena / 2% sphalerite / 1% pyrite&gt;&gt; Massive galena vein; med grained 'steel' galena; also contains some dk brown sphalerite in small semi-massive aggregates and locally some small semi-massive aggregates of pyrite.</p> <p>&lt;&lt;Min: 33.5 - 42: 0.05% pyrite&gt;&gt; Trace pyrite associated with oxidized seams in sediments;generally all pyrite oxidized to limonite;</p> <p>&lt;&lt;Min: 42 - 48: 1% pyrite / 0.3% pyrite&gt;&gt; Higher overall pyrite content within the more carbonaceous argillite;</p> <p>&lt;&lt;Vein: 33.4 - 33.5: 100% Massive Sulphide/Sulphides undifferentiated&gt;&gt;</p> <p>&lt;&lt;Vein: 42 - 48: 0.5% Siderite quartz sulphide (pyrrhotite+pyrite+/-chalcopyrite)&gt;&gt; Conformable siderite-qtz-py veins more common in carbonaceous argillite;</p> <p>&lt;&lt;Struc: 0 - 33: moderate to strong Intercalated/Interbedded/Interlayered/Interfoliated 20 deg. &gt;&gt; Some variations locally in laminations from 12 to 25 TCA but generally around 20 TCA;</p> <p>Note: @29.65m well-developed flame structure manifested by a slightly coarser grained, somewhat oxidized silt/sand settling into a fine grained black mud squeezing the black mud(argillite) up into the sand as a flame structure; indicates right side up tops.</p> <p>&lt;&lt;Struc: 33.4 - 33.5: intense Veining - fracture fill&gt;&gt; Massive galena +/- qtz vein; broken up; true width or even true core length difficult to determine; probably at least 10cm long (possibly up 25cm if recovery factor taken into account, ie recovery in this interval is 36.4%).</p>											
			33.40	33.50	0.10	0027204	46	669	0.009	10	1.74
			33.50	33.65	0.15	0027205	10	35	0.004	3.47	0.33
			33.65	36.27	2.62	0027206	8	1	0.007	0.08	0.08



## GeoSpark: Drill Hole Report

Hole: GZ-19-04

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	Au Best ppb	Ag Best ppm	Cu Best pct	Pb Best pct	Zn Best pct
		<<Struc: 33.5 - 33.65: intense Fault>> Gougy rubbly fault forming the hangingwall to the massive galena vein; fault includes small white quartz vein fragments;									
		<<Struc: 36.27 - 36.65: intense Fault 30 deg. >> Oxidized gravelly/gougy fault; no visible sulphides;									
		<<Struc: 36.7 - 48: moderate to strong Finely laminated/laminated/finely bedded 25 deg. >>									
<b>48.00</b>	<b>60.66</b>	<b>SLTS Siltstone</b>									
		Predominantly a massive light grey siltstone/fine grained sandstone intercalated with subordinate amounts of well-laminated argillite and argillaceous siltstone; Siltstone generally unoxidized except in contact with black fg argillaceous laminae, where you get some diffuse oxidation as limonite into the siltstone; elsewhere there are some broader diffuse reddish/orange oxidation fronts over several cm's in the siltstone;									
		@53.6 - well-developed flame structures indicating right side up stratigraphy.									
		<<Min: 48 - 60.66: 0.05% pyrite>> Trace pyrite overall associated with narrow siderite-qtz veinlet;									
		<<Struc: 52.75 - 52.76: strong Veining - fracture fill 25 deg. >> 1cm quartz (py?)vein conformable to bedding; sulphides completely oxidized;									
		<<Struc: 57.6 - 59.8: strong Finely laminated/laminated/finely bedded 25 deg. >>									

**End of Hole @ 60.66**





## GeoSpark: Drill Hole Report

**Project:** Bull River

**Hole:** GZ-19-05

<b>Prospect:</b>	G ZONE	<b>Survey Type:</b>	GPS	<b>Logged By:</b>	Bernie Augsten	<b>Hole Type:</b>	DD
<b>UTM Grid:</b>	NAD83_Z11	<b>Survey By:</b>	Jill Christmann	<b>Date Started:</b>	2019-07-29	<b>Hole Diameter:</b>	7.57
<b>UTM East:</b>	626014	<b>Azimuth:</b>	346	<b>Date Completed:</b>	2019-07-30	<b>Core Size:</b>	NQ
<b>UTM North:</b>	5477937	<b>Dip:</b>	-50	<b>Drill Company:</b>	Lucky	<b>Casing Pulled?:</b>	<input checked="" type="checkbox"/>
<b>UTM Elevation (m):</b>	1211	<b>Length (m):</b>	62.48	<b>Drill Rig:</b>	Rig1	<b>Casing Depth (m):</b>	1.52
<b>Local Grid:</b>				<b>Drill Started:</b>	2019-07-28	<b>Reduced (m):</b>	
<b>Local East:</b>				<b>Drill Completed:</b>	2019-07-29	<b>Reduced Size:</b>	
<b>Local North:</b>						<b>Oriented?:</b>	<input type="checkbox"/>
<b>Local Elevation (m):</b>		<b>Comments:</b>	This hole was collared to test for the G Zone vein down dip of where it was intersected in GZ-19-04.				
<b>Hole Status:</b>	Completed	The hole failed to intersect the massive sulphide vein as seen in GZ-19-04; some faulting with clay gouge was intersected in the general area;					
<b>Hole Purpose:</b>	EXPL						

Depth (m)	Survey Method	Survey By	Date Surveyed	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Mag. Field	Accept Values?	Comments
10.67	EZShot	Jeff	2019-07-28	-49.9	328.9	14.1	343	57029	<input checked="" type="checkbox"/>	
22.86	EZShot	Jeff	2019-07-28	-49.5	330.1	14.1	344.2	55698	<input checked="" type="checkbox"/>	
62.48	EZShot	Jeff	2019-07-29	-49.9	331.2	14.1	345.3	56062	<input checked="" type="checkbox"/>	



## GeoSpark: Drill Hole Report

Hole: GZ-19-05

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	Au Best ppb	Ag Best ppm	Cu Best pct	Pb Best pct	Zn Best pct
<b>0.00</b>	<b>1.52</b>	<b>OVB Overburden</b>									
Cased to 1.52m; virtually no overburden;											
<b>1.52</b>	<b>26.05</b>	<b>ARGL Argillite</b>	<b>dark grey</b>	<b>VFG</b>							
Intercalated sequence of very fine grained, well-laminated dk grey to black argillite with somewhat coarser grained light grey massive bedded to weakly laminated siltstone/fine sandstone;											
@22.05 - 3-4cm oxidized clay/gouge seam at 50 TCA crosscutting bedding laminations											
@22.15 - 3cm oxidized clay/gouge seam at 60 TCA crosscutting bedding laminations											
23.25 - 24.4 - sediments cut by a weak network (weakly sheeted) of vuggy extensional qtz+/-py veinlets (see veining);											
<<Min: 1.52 - 23.25: 0.3% pyrite / 0.05% pyrite / 0.05% magnetite>> Pyrite spatially related to the rusty oxidized seams; still see minor diss py and occassional rounded aggregates of py											
<<Min: 23.25 - 24.4: 0.5% pyrite / 0.3% pyrite>> Oxidized seams indicate that likely higher pyrite content preoxidation;											
<<Min: 24.4 - 26.05: 0.5% pyrite / 0.3% pyrite>>											
<<Vein: 23.25 - 24.4: 2% Quartz-Pyrite>> Series of subparallel veinlets ranging in size from <1mm to 3mm, locally appearing sheeted; veinlets oxidized producing limonitic vugs; veinlets cross-cut bedding at acute angles.											
<<Struc: 1.52 - 20.3: strong Finely laminated/laminated/finely bedded 30 deg. >> Interbedded light grey siltstone/sandstone with med to dk grey argillite;											
<<Struc: 21 - 30: strong Finely laminated/laminated/finely bedded 35 deg. >>											
<b>22.00</b>	<b>23.25</b>				1.25	0027207	4	1	0.003	0.01	0.01
<b>23.25</b>	<b>24.40</b>				1.15	0027208	3	1	0.002	0.01	0.02
<b>24.40</b>	<b>26.05</b>				1.65	0027209	5	1	0.001	0.01	0.02
<b>26.05</b>	<b>28.85</b>	<b>ARGL_SD Argillite with very fine laminations producing a striped appearance</b>	<b>dark grey</b>	<b>VFG</b>							
Very finely laminated argillite with a striped appearance caused by finely intercalated, very thin, (<0.5mm) dk grey to light grey/whitish laminae; the lighter laminae appear quartz rich and may have contained more pyrite on their margins - now oxidized to limonite;											
<<Min: 26.05 - 28.85: 0.1% pyrite>> Most pyrite if present oxidized;											
<b>26.05</b>	<b>27.50</b>				1.45	0027211	6	1	0.001	0.02	0.02

Hole: GZ-19-05

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	Au Best ppb	Ag Best ppm	Cu Best pct	Pb Best pct	Zn Best pct
			27.50	28.85	1.35	0027212	7	1	0.003	0.03	0.03
			28.85	29.50	0.65	0027213	11	1	0.013	0.05	0.06
<b>28.85</b>	<b>29.50</b>	<b>ARGL_QV Argillite with strong disrupted grey N qtz veining; veining conformable to bedding</b>									
<p>Narrow interval of quartz veined argillite consisting of predominantly narrow, &lt;5mm, foliation/bedding parallel veinlets, partially oxidized with limonitic vugs and some finer, hairline cross-cutting qtz veinlets; the argillite is distorted with overall consisting bedding to rest of the hole but with a more 'wavy' texture to it; overall veining comprises 10-15% of rock mass; Upper contact of zone is faulted parallel to bedding, with some pale grey clay gouge;</p> <p>&lt;&lt;Min: 28.85 - 29.5: 0.1% pyrite&gt;&gt;</p> <p>&lt;&lt;Vein: 28.85 - 29.5: 12% Quartz&gt;&gt; Partially oxidized with limonitic vugs; sections of deformed argillite producing a wavy deformation with qtz veinlets parallel to foliation;</p>											
<b>29.50</b>	<b>31.25</b>	<b>ARGL_SD Argillite with very fine laminations producing a striped appearance</b>									
<p>&lt;&lt;Min: 29.5 - 31.25: 0.1% pyrite&gt;&gt;</p>											
<b>31.25</b>	<b>62.48</b>	<b>SLTS Siltstone light grey</b>									
<p>Intercalated sequence of light grey fine grained, massive bedded to weakly bedded siltstones with subordinate well-laminated dk grey to black argillites; where massive the light grey siltstone is almost a quartzite in appearance;</p> <p>32.8 - 34.1 - FAULT; poor recovery so actual contact depths may vary somewhat. (See Structures); fault may correspond to the down dip extension of the mineralized zone encountered in GZ-19-04. If it does it would indicate an apparent dip of the G-Zone to the southeast.</p> <p>&lt;&lt;Min: 31.25 - 32.8: 0.05% pyrite&gt;&gt;</p> <p>&lt;&lt;Min: 34.1 - 50.4: 0.05% pyrite&gt;&gt; See rare rounded fg aggregates of pyrite, usually &lt;0.5cm within laminated portions of the sediments, usually within lighter coloured laminae.</p> <p>&lt;&lt;Min: 50.4 - 50.7: 0.05% argentite&gt;&gt; Fine grained, soft med grey/possibly blue grey metallic sulphide; doesn't look like moly? Possible silver sulphosalt;</p> <p>&lt;&lt;Min: 50.7 - 62.48: 0.05% pyrite&gt;&gt;</p> <p>&lt;&lt;Vein: 50 - 51: 0.1% Quartz-Feldspar-Sulphide&gt;&gt; Cream coloured veinlets with very diffuse appear margins; locally contain trace fg grey soft metallic sulphide;</p>											
			29.50	31.25	1.75	0027214	7	1	0.005	0.02	0.05
			31.25	32.80	1.55	0027215	4	1	0.001	0.01	0.06
			32.80	34.10	1.30	0027216	4	1	0.002	0.01	0.06
			34.10	35.05	0.95	0027217	5	1	0.001	0.01	0.03
			35.05	36.00	0.95	0027218	3	1	0.002	0.01	0.01
			50.40	50.70	0.30	0027219	5	1	0.0005	0.01	0.005



## GeoSpark: Drill Hole Report

Hole: GZ-19-05

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	Au Best ppb	Ag Best ppm	Cu Best pct	Pb Best pct	Zn Best pct
		<<Struc: 32.8 - 34.1: intense Fault>> Clay gouge rubble fault; oxidized to a orange/brown clay; no visible sulphides and no visible qtz vein fragments; no massive galena fragments;									
		<<Struc: 35 - 50.4: moderate Finely laminated/laminated/finely bedded 40 deg. >>									
		<<Struc: 50.4 - 50.7: weak to moderate Veining - fracture fill 15 deg. >> Two parallel veinlets (5mm); quartz-feldspar +/- trace fg, soft grey metallic sulphide;									
		<<Struc: 50.7 - 62.48: moderate Finely laminated/laminated/finely bedded 40 deg. >>									

**End of Hole @ 62.48**



## GeoSpark: Drill Hole Report

**Project:** Bull River

**Hole:** GZ-19-06

<b>Prospect:</b>	G ZONE	<b>Survey Type:</b>	GPS	<b>Logged By:</b>	Bernie Augsten	<b>Hole Type:</b>	DD
<b>UTM Grid:</b>	NAD83_Z11	<b>Survey By:</b>	Jill Christmann	<b>Date Started:</b>	2019-07-30	<b>Hole Diameter:</b>	7.57
<b>UTM East:</b>	626014	<b>Azimuth:</b>	0	<b>Date Completed:</b>	2019-08-01	<b>Core Size:</b>	NQ
<b>UTM North:</b>	5477937	<b>Dip:</b>	-25	<b>Drill Company:</b>	Lucky	<b>Casing Pulled?:</b>	<input checked="" type="checkbox"/>
<b>UTM Elevation (m):</b>	1211	<b>Length (m):</b>	76.2	<b>Drill Rig:</b>	Rig1	<b>Casing Depth (m):</b>	1.52
<b>Local Grid:</b>				<b>Drill Started:</b>	2019-07-29	<b>Reduced (m):</b>	
<b>Local East:</b>				<b>Drill Completed:</b>	2019-07-30	<b>Reduced Size:</b>	
<b>Local North:</b>						<b>Oriented?:</b>	<input type="checkbox"/>
<b>Local Elevation (m):</b>							
<b>Hole Status:</b>	Completed	<b>Comments:</b>					
<b>Hole Purpose:</b>	EXPL	Hole was collared from the same location as GZ-19-04,05 but oriented northerly to test for the G zone structure underneath the old portal area, further east along strike.					
		The G Zone structure was not intersected in this hole.					

45.2 - 46.3 - a graphitic fault with strong siderite-qtz veining and very minor pyrite cuts the host sediments at very low acute angles.

@48.25m - see trace amounts of orange/brown sphalerite and galena in a narrow, 1-3mm, siderite-qtz veinlet parallel to bedding;

Depth (m)	Survey Method	Survey By	Date Surveyed	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Mag. Field	Accept Values?	Comments
24.38	EZShot	Jeff	2019-07-30	-25.3	342.4	14.1	356.5	55473	<input checked="" type="checkbox"/>	
60.96	EZShot	Jeff	2019-07-31	-24.8	344.8	14.1	358.9	55493	<input checked="" type="checkbox"/>	



## GeoSpark: Drill Hole Report

Hole: GZ-19-06

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	Au Best ppb	Ag Best ppm	Cu Best pct	Pb Best pct	Zn Best pct
0.00	39.50	ARGL Argillite dark grey VFG									
<p>Predominantly a dk grey to black fine grained laminated argillite with subordinate limonitic seams (oxidized pyritic laminae); becomes intercalated with slightly coarser grained qtz siltstones toward lower contact;</p> <p>0 - 30.25 - rock mass is strongly fx's, often along bedding planes where it has been oxidized;</p> <p>@18.55 - 2-3cm dk brown clay gouge/mud; no contact info;</p> <p>&lt;&lt;Min: 0 - 30.35: 0.05% pyrite&gt;&gt; Interval moderately to strongly oxidized; most pyrite oxidized. Original pyrite content likely quite a bit higher.</p> <p>&lt;&lt;Min: 30.35 - 39.5: 1% pyrite&gt;&gt; Pyrite is concentrated in minor bedding parallel siderite-qtz veining.</p> <p>&lt;&lt;Vein: 30.35 - 41: 1% Siderite quartz sulphide (pyrrhotite+/pyrite+/-chalcopyrite)&gt;&gt;</p> <p>&lt;&lt;Struc: 0 - 21: strong Finely laminated/laminated/finely bedded 5 deg. &gt;&gt; Some variability;</p> <p>&lt;&lt;Struc: 21 - 27: strong Finely laminated/laminated/finely bedded 12 deg. &gt;&gt;</p> <p>&lt;&lt;Struc: 30.35 - 30.5: strong Finely laminated/laminated/finely bedded 25 deg. &gt;&gt;</p> <p>&lt;&lt;Struc: 30.8 - 31.8: strong Finely laminated/laminated/finely bedded 20 deg. &gt;&gt;</p> <p>&lt;&lt;Struc: 32 - 45.2: strong Finely laminated/laminated/finely bedded 15 deg. &gt;&gt;</p>											
39.50	52.35	ARGL_SD Argillite with very fine laminations producing a striped appearance dark grey FG	44.00	45.20	1.20	0027220	13	1	0.007	0.03	0.03
<p>Finely laminated argillite with alternating very light grey laminae (&lt;1mm) and dk grey to black laminae producing a 'striped' appearance.</p> <p>Lower contact gradational into more qtz siltstone dominated succession.</p>											
<p>45.2 - 46.3 - FAULT; (See Structures); graphitic fault with minor pyrite;</p>											
			45.20	46.30	1.10	0027222	6	1	0.004	0.02	0.03
<p>&lt;&lt;Min: 39.5 - 45.2: 0.5% pyrite&gt;&gt; Disseminated blebs and occasional larger blebs to 5mm within the laminations or 'growing' out of them, (diagenetic pyrite);</p>											
			46.30	47.00	0.70	0027223	11	1	0.012	0.02	0.01
<p>&lt;&lt;Min: 45.2 - 46.3: 0.5% pyrite&gt;&gt; Minor blebs of pyrite within fault;</p>											
			47.00	48.00	1.00	0027224	10	1	0.007	0.01	0.01
<p>&lt;&lt;Min: 46.3 - 52.35: 0.5% pyrite / 0.1% pyrite / 0.1% pyrite / 0.1% sphalerite / 0.05% galena&gt;&gt; Minor fine blebby sphalerite and singular diss galena seen in bedding parallel qtz-siderite stringer, eg. 48.25m;</p>											
			48.00	49.00	1.00	0027225	6	1	0.004	0.01	0.02
<p>&lt;&lt;Vein: 45.2 - 46.3: 10% Siderite quartz sulphide (pyrrhotite+/pyrite+/-chalcopyrite)&gt;&gt; Strong distorted veining within the fault. Only very minor sulphides as pyrite.</p>											



## GeoSpark: Drill Hole Report

Hole: GZ-19-06

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	Au Best ppb	Ag Best ppm	Cu Best pct	Pb Best pct	Zn Best pct
		<<Vein: 46.3 - 50: 0.3% Siderite quartz sulphide (pyrrhotite+/pyrite+/-chalcopyrite)>> Very narrow lamination parallel siderite-qtz veins with minor py and locally trace sphalerite, galena.									
		<<Struc: 45.2 - 45.2: intense Contact 30 deg. >> Upper contact of graphitic fault;									
		<<Struc: 45.21 - 46.29: intense Fault 25 deg. >> Fault comprised of black graphitic argillite with moderate to strong quartz and siderite veining with some associated pyrite;									
		<<Struc: 46.3 - 46.3: intense Contact 20 deg. >> Lower contact of graphitic fault;									
		<<Struc: 46.4 - 52.35: intense Finely laminated/laminated/finely bedded 15 deg. >>									
		<b>52.35 68.00 SLTS Siltstone light grey FG</b>									
		Predominantly massive bedded fine grained quartz siltstone/sandstone; metamorphosed to weak qtz siltite/quartzite; Includes minor intercalated finer grained argillaceous laminae; Locally displays good graded bedding with finer grained laminae, eg. 68m; stratigraphy right side up. Lower contact gradational; Poorly mineralized with diagenetic pyrite only;									
		<<Min: 52.35 - 68: 0.1% pyrite>> Minro pyrite as rounded fine grained aggregates;									
		<<Struc: 53 - 61: weak to moderate Intercalated/Interbedded/Interlayered/Interfoliated 8 deg. >> Variable from 7-9 TCA;									
		<<Struc: 62 - 68: weak Intercalated/Interbedded/Interlayered/Interfoliated 5 deg. >>									
		<b>68.00 76.20 ARGL Argillite black</b>									
		Very fine grained dk grey to black laminated argillite with very minor light grey laminae; rock is carbonaceous with some graphitic slips.									
		<<Min: 68 - 76.2: 1% pyrite>> See pyrite forming irregularly rounded, oval shaped aggregates, typically <10mm and usually nucleating in or at boundaries of the lighter grey to whitish laminae. Pyrite aggregates seem to have a coarser grained rim and finer grained centers.									
		<<Struc: 68 - 76: moderate to strong Finely laminated/laminated/finely bedded 13 deg. >> Varible from 10-15 TCA - generally steepening downhole;									

End of Hole @ 76.2



## GeoSpark: Drill Hole Report

**Project:** Bull River

**Hole:** RX-19-01

<b>Prospect:</b>	REX	<b>Survey Type:</b>	GPS	<b>Logged By:</b>	Bernie Augsten	<b>Hole Type:</b>	DD
<b>UTM Grid:</b>	NAD83_Z11	<b>Survey By:</b>	Jill Christmann	<b>Date Started:</b>	2019-08-30	<b>Hole Diameter:</b>	7.57
<b>UTM East:</b>	627993.18	<b>Azimuth:</b>	138	<b>Date Completed:</b>	2019-09-01	<b>Core Size:</b>	NQ
<b>UTM North:</b>	5474285.67	<b>Dip:</b>	-43	<b>Drill Company:</b>	Lucky	<b>Casing Pulled?:</b>	<input checked="" type="checkbox"/>
<b>UTM Elevation (m):</b>	947	<b>Length (m):</b>	208.48	<b>Drill Rig:</b>	Rig1	<b>Casing Depth (m):</b>	4.27
<b>Local Grid:</b>				<b>Drill Started:</b>	2019-08-03	<b>Reduced (m):</b>	
<b>Local East:</b>				<b>Drill Completed:</b>	2019-08-05	<b>Reduced Size:</b>	
<b>Local North:</b>						<b>Oriented?:</b>	<input type="checkbox"/>
<b>Local Elevation (m):</b>							
<b>Hole Status:</b>	Completed	<b>Comments:</b>					
<b>Hole Purpose:</b>	EXPL	Hole was collared to test for veining at depth below veining seen in the gravel pit. Three zones (two large) of veining were intersected as noted below; overall chalcopryrite content low.					

66.85 - 69.05 - small zone of moderate sheeted siderite-qtz-po veining; no chalcopryrite;

103.85 - 139.7 - interval characterized by weak to strong siderite-qtz+/-po,py(cpy) veining; veining largely manifests itself as sheeted veining but includes more irregular vein replacements and locally some weakly ptymatic veins; overall cpy content very low;

151.62 - 164.1 - second broad interval of SIQS veining; interval includes two massive veins of coarse grained quartz, siderite with variable pyrrhotite; overall cpy content low;

Depth (m)	Survey Method	Survey By	Date Surveyed	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Mag. Field	Accept Values?	Comments
25.6	EZShot	Jeff	2019-03-08	-42.4	125	14.1	139.1	55726	<input checked="" type="checkbox"/>	
132.2	EZShot	Jeff	2019-04-08	-44.2	125.6	14.1	139.7	55656	<input checked="" type="checkbox"/>	
208.48	EZShot	Jeff	2019-05-08	-44.3	125.1	14.1	139.2	54484	<input checked="" type="checkbox"/>	





## GeoSpark: Drill Hole Report

Hole: RX-19-01

Hole: RX-19-01

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	Au Best ppb	Ag Best ppm	Cu Best pct	Pb Best pct	Zn Best pct
0.00	4.27	OVB Overburden									
4.27	208.48	SLTS Siltstone									
		light grey FG									
<p>Interlaminated sequence of light grey siltstones (siltite) and dk grey to black argillite; well-bedded with mm-cm scale laminae; locally see more massive light grey siltstone beds;</p> <p>66.85 - 69.05 - small zone of moderate sheeted siderite-qtz-po veining; no chalcopyrite;</p> <p>103.85 - 139.7 - interval characterized by weak to strong siderite-qtz+/-po,py(cpy) veining; veining largely manifests itself as sheeted veining but includes more irregular vein replacements and locally some weakly ptymatic veins; overall cpy content very low;</p> <p>151.62 - 164.1 - second broad interval of SIQS veining; interval includes two massive veins of coarse grained quartz, siderite with variable pyrrhotite; overall cpy content low;</p> <p>&lt;&lt;Min: 4.27 - 58: 2.5% pyrrhotite / 0.5% pyrrhotite / 0.5% pyrite / 0.1% pyrite&gt;&gt; Pyrrhotite occurs as grains and blebs, often elongated, sometimes subhedral, often enriched in lighter grey siltstone laminae; also seen as semi-massive to massive in narrow 1-2mm seams(veins?) parallel to bedding often with some siderite; variable but lesser pyrite occurs similarly; pyrite also seen as larger irregular med to coarse grained aggregates randomly distributed in wallrock;</p> <p>&lt;&lt;Min: 58 - 66.85: 2% pyrrhotite / 1% pyrrhotite / 0.5% pyrite / 0.3% pyrite&gt;&gt;</p> <p>&lt;&lt;Min: 66.85 - 69.05: 4% pyrrhotite / 0.3% pyrite / 0.1% pyrite&gt;&gt; Pyrrhotite occurs in the siderite-qtz veins as small irregular aggregates along grain boundary fractures? and more semi-massive to massive aggregates; sometimes po concentrated as a thin more or less massive seam on the vein margins;</p> <p>&lt;&lt;Min: 69.05 - 103.85: 2% pyrrhotite / 1% pyrrhotite / 0.5% pyrrhotite / 0.5% pyrite&gt;&gt; Pyrrhotite seen as semi-massive to massive seams parallel to laminations with variable siderite; Minor po in crosscutting siderite-qtz veinlets;</p> <p>&lt;&lt;Min: 103.85 - 109.9: 2% pyrrhotite / 1% pyrrhotite / 0.1% pyrite / 0.05% chalcopyrite&gt;&gt;</p> <p>&lt;&lt;Min: 109.9 - 111.25: 1.5% pyrrhotite / 0.3% pyrite&gt;&gt;</p> <p>&lt;&lt;Min: 111.25 - 115.85: 1.5% pyrrhotite / 0.3% pyrrhotite / 0.3% pyrite / 0.2% pyrite&gt;&gt;</p> <p>&lt;&lt;Min: 115.85 - 117.15: 10% pyrrhotite / 0.3% pyrite / 0.05% chalcopyrite&gt;&gt;</p> <p>&lt;&lt;Min: 117.15 - 121.75: 3% pyrrhotite / 0.5% pyrite / 0.05% chalcopyrite&gt;&gt; All sulphides concentrated in veins; individual veins contain rel high concentrations of pyrrhotite; virtually no pyrrhotite in wallrock;</p> <p>&lt;&lt;Min: 121.75 - 122.5: 8% pyrrhotite / 0.1% pyrrhotite / 0.3% pyrite / 0.07% pyrite&gt;&gt;</p> <p>&lt;&lt;Min: 122.5 - 130: 2% pyrrhotite / 0.3% pyrite / 0.1% chalcopyrite&gt;&gt;</p> <p>&lt;&lt;Min: 130 - 132.15: 1% pyrrhotite / 0.1% pyrite / 0.05% chalcopyrite&gt;&gt;</p> <p>&lt;&lt;Min: 132.15 - 134: 3% pyrrhotite / 0.5% pyrite / 0.1% chalcopyrite&gt;&gt;</p>											

Hole: RX-19-01

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	Au Best ppb	Ag Best ppm	Cu Best pct	Pb Best pct	Zn Best pct
		<<Min: 134 - 135.85: 4% pyrrhotite / 0.5% pyrite / 0.05% chalcopyrite / 0.03% arsenopyrite>> Individual veins/veinlets contain up to 20% po; A single solitary rounded aggregate of aspy @135.78m;									
		<<Min: 135.85 - 139.7: 1% pyrrhotite / 0.1% pyrite / 0.05% chalcopyrite>>									
		<<Min: 139.7 - 151.62: 2% pyrrhotite / 1% pyrrhotite / 0.5% pyrite / 0.01% arsenopyrite / 0.01% chalcopyrite>> Most pyrrhotite as diss fine to coarse blebs, sometimes as elongated blebs aligned with laminations; also massive seams and aggregates as narrow bands parallel to laminations sometimes with siderite; No crosscutting veins; @151m several small <1mm euhedral rhomb-shaped crystals of arsenopyrite in the selvage to a pyrite fx and within massive po at same location; trace cp here as well;									
		<<Min: 151.62 - 153.33: 1% pyrrhotite / 1% pyrrhotite / 0.3% pyrrhotite / 0.3% pyrite / 0.03% arsenopyrite / 0.03% chalcopyrite>> See rare euhedral grains of arsenopyrite within a thin seam of bedding parallel massive po; minor associated cpy partially rimming the aspy, eg. 152.48m;									
		<<Min: 153.33 - 153.72: 3% pyrrhotite / 0.05% chalcopyrite>> Majority of po concentrated at or near the LC;									
		<<Min: 153.72 - 157.75: 4% pyrrhotite / 0.1% pyrite / 0.1% chalcopyrite>> Most po occurs as relative coarse irregular fc aggregates (<1cm) within SIQS veins; Pyrite and chalcopyrite occur to a much lesser extent as finer irregular fc masses usually spatially associated with po in the veins;									
		<<Min: 157.75 - 158.85: 1% pyrrhotite / 0.1% pyrite / 0.05% chalcopyrite>>									
		<<Min: 158.85 - 164.1: 2% pyrrhotite / 0.5% pyrite / 0.05% chalcopyrite>> Pyrrhotite occurs as diss irregular masses in veins, semi-massive aggregates along vein margins and locally some larger aggregates within veins; within veins po appears to be controlled by grain boundaries and micro fractures;									
		<<Min: 164.1 - 208.48: 2% pyrrhotite / 1% pyrrhotite / 0.5% pyrite / 0.05% chalcopyrite>> Po occurs as diss blebs (fine to coarse), sometimes elongated parallel to bedding, and as semi-massive to massive, narrow seams parallel to bedding sometimes with some siderite; rare crosscutting SIQS veining;									
		<<Alt: 119 - 130.9: weak Sericitic / weak Actinolite / weak Saussuritisation>>									
		<<Alt: 130.9 - 135.85: weak to moderate Chlorite / moderate Sericitic / weak Actinolite>>									
		<<Alt: 151.62 - 164.1: weak to moderate Sericitic / weak to moderate Chlorite / weak Actinolite>>									
		<<Vein: 4.27 - 58: 0.5% Siderite-quartz>>									
		<<Vein: 58 - 66.85: 1% Siderite quartz sulphide (pyrrhotite+/pyrite+/-chalcopyrite) / 1% Siderite-quartz>> Variably oriented siderite-qtz-pyrrhotite+/-pyrite veins; no visible chalcopyrite; veins vary in width from 2mm-2cm; pyrrhotite content variable from semi-massive to blebby within veins;									
		<<Vein: 66.85 - 69.05: 5% Siderite quartz sulphide (pyrrhotite+/pyrite+/-chalcopyrite)>> Interval dominated by a series of more or less sheeted siderite-qtz-po+/-py veins ranging in thickness from 2mm to 1.5cm;									

Hole: RX-19-01

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	Au Best ppb	Ag Best ppm	Cu Best pct	Pb Best pct	Zn Best pct
		<<Vein: 69.05 - 103.85: 1% Siderite-quartz / 0.1% Siderite quartz sulphide (pyrrhotite+pyrite+/-chalcopyrite)>> Interval of very weak veining; some weak siderite-qtz veinlets/hairline veins as tension gashes/extensional fillings; rare cross-cutting siderite-qtz-po+/-py veinlets;									
		<<Vein: 103.85 - 109.9: 2.5% Siderite quartz sulphide (pyrrhotite+pyrite+/-chalcopyrite) / 1% Siderite-quartz>> SIQS veins have a crude zoning often with pyrrhotite-rich margins, and bands of cream-coloured coarser siderite separated by darker grey, narrower finer grained siderite-qtz mixture, eg. 106.95m;									
		<<Vein: 109.9 - 111.25: 35% Siderite quartz sulphide (pyrrhotite+pyrite+/-chalcopyrite) / 1% Siderite-quartz>> Relatively sulphide poor veins;									
		<<Vein: 111.25 - 115.85: 2% Siderite quartz sulphide (pyrrhotite+pyrite+/-chalcopyrite) / 0.5% Siderite-quartz>> Locally several parallel, very narrow (~1mm) veinlets consist mostly of massive po with very little siderite, eg. 112.3m;									
		<<Vein: 115.85 - 117.15: 45% Siderite quartz sulphide (pyrrhotite+pyrite+/-chalcopyrite) / 0.3% Siderite-quartz>>									
		<<Vein: 117.15 - 121.75: 5% Siderite quartz sulphide (pyrrhotite+pyrite+/-chalcopyrite) / 0.3% Siderite-quartz>> Locally see some weakly pygmatic veining textures;									
		<<Vein: 121.75 - 122.5: 30% Siderite quartz sulphide (pyrrhotite+pyrite+/-chalcopyrite)>>									
		<<Vein: 122.5 - 130: 4% Siderite quartz sulphide (pyrrhotite+pyrite+/-chalcopyrite)>>									
		<<Vein: 130 - 132.15: 16% Siderite quartz sulphide (pyrrhotite+pyrite+/-chalcopyrite)>> Some of the veins are siderite poor and whiter in colour - may in fact be a different generation; sulphide mineralogy remains the same; overall veins have a sheeted arrangement; generally veins don't appear to have an altered vein selvage but in this interval see some med green chlorite and locally as a vein selvage or halo, eg. 131m;									
		<<Vein: 132.15 - 134: 6% Siderite quartz sulphide (pyrrhotite+pyrite+/-chalcopyrite)>>									
		<<Vein: 134 - 135.85: 8% Siderite quartz sulphide (pyrrhotite+pyrite+/-chalcopyrite) / 1% Quartz / 1% Quartz-Pyrrhotite>>									
		<<Vein: 135.85 - 139.7: 2% Siderite quartz sulphide (pyrrhotite+pyrite+/-chalcopyrite)>> Sheeted SIQS veining slowly dies out;									
		<<Vein: 151.62 - 153.33: 7% Siderite quartz sulphide (pyrrhotite+pyrite+/-chalcopyrite)>> Interval marks the start of the sheeted SIQS veining;									
		<<Vein: 153.33 - 153.72: 100% Siderite quartz sulphide (pyrrhotite+pyrite+/-chalcopyrite)>>									
		<<Vein: 153.72 - 157.75: 17% Siderite quartz sulphide (pyrrhotite+pyrite+/-chalcopyrite)>> Some veins have some med green chlorite/actinolite within the vein; may in part be included altered wallrock?									
		<<Vein: 157.75 - 158.85: 100% Siderite quartz sulphide (pyrrhotite+pyrite+/-chalcopyrite)>> Vein appears to be more of a replacement style vein vs fissure vein as evidenced by the more or less gradational upper contact; lower contact somewhat sharper but does transition into a sheeted vein system; Vein is somewhat crudely zoned with a more siderite rich upper contact area and more quartz rich the lower half of the vein;									



## GeoSpark: Drill Hole Report

Hole: RX-19-01

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	Au Best ppb	Ag Best ppm	Cu Best pct	Pb Best pct	Zn Best pct
		<<Vein: 158.85 - 164.1: 100% Siderite quartz sulphide (pyrrhotite+/pyrite+/-chalcopyrite)>> Sheeted nature of this vein set not so obvious; numerous more irregular orientations; almost all the veins have that 'polygonal' texture seen elsewhere in the smaller siderite-qtz-po veins.									
		<<Vein: 164.1 - 208.48: 0.05% Siderite quartz sulphide (pyrrhotite+/pyrite+/-chalcopyrite)>>									
		<<Struc: 4.27 - 36: strong Finely laminated/laminated/finely bedded 60 deg. >> Locally variable over short distances from 45 - 70 TCA;									
		<<Struc: 36 - 47: strong Finely laminated/laminated/finely bedded 50 deg. >> Variable from 45 - 55 TCA;									
		<<Struc: 47 - 52.4: strong Finely laminated/laminated/finely bedded 60 deg. >>									
		<<Struc: 52.4 - 57.7: strong Finely laminated/laminated/finely bedded 50 deg. >>									
		<<Struc: 66.85 - 69.05: moderate Veining - fracture fill 55 deg. >> Sheeted siderite-qtz-po veins vary from about 45 to 65 TCA but average around 55;									
		<<Struc: 69.05 - 72: strong Finely laminated/laminated/finely bedded 55 deg. >>									
		<<Struc: 72 - 74.6: strong Finely laminated/laminated/finely bedded 43 deg. >>									
		<<Struc: 75 - 79: strong Finely laminated/laminated/finely bedded 55 deg. >> Local variations 52 to 58 TCA;									
		<<Struc: 79 - 92.15: strong Finely laminated/laminated/finely bedded 50 deg. >> Some local variability to 43 TCA; Note: @92.15 there is a knife-edge sharp angular unconformity; after this point bedding laminations flatten out considerably and become more erratic;									
		<<Struc: 103.85 - 109.9: weak to moderate Veining - fracture fill 40 deg. >> Sheeted SIQS veins; laminations in sediments in this interval quite variable from 0 - 40 TCA;									
		<<Struc: 110.6 - 110.6: strong Contact 32 deg. / strong Finely laminated/laminated/finely bedded 0 deg. >> Sharp lower contact of a larger SIQS vein;									
		<<Struc: 111.2 - 111.2: strong Contact 35 deg. >> Sharp lower contact of another larger SIQS vein;									
		<<Struc: 122.5 - 130: moderate Veining - fracture fill 40 deg. / moderate to strong Finely laminated/laminated/finely bedded 20 deg. >>									
		<<Struc: 130 - 132.15: moderate to strong Veining - fracture fill 50 deg. >> veins range from 35 - 70 TCA but generally have the appearance of subparallel sheeted set.									
		<<Struc: 135.85 - 139.7: moderate Veining - fracture fill 45 deg. >> Sheeted veining varies from 30 to 60 or so but averages around 45 TCA;									
		<<Struc: 140 - 141: strong Finely laminated/laminated/finely bedded 18 deg. >>									
		<<Struc: 141 - 153: strong Finely laminated/laminated/finely bedded 22 deg. >> Variable from 20-25 TCA;									



## GeoSpark: Drill Hole Report

Hole: RX-19-01

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	Au Best ppb	Ag Best ppm	Cu Best pct	Pb Best pct	Zn Best pct
<<Struc: 153.33 - 153.72: intense Veining - fracture fill 30 deg. >> Coarse grained siderite-qtz-po vein; UC@25, LC@30;											
<<Struc: 157.75 - 158.85: intense Veining - fracture fill 65 deg. >> Coarse grained white quartz/cream yellow siderite +/- some pyrrhotite,py and tr cpy; vein is predominantly white cg quartz with lesser siderite; Vein orientation based on sharp lower contact; upper contact grades into a fracture/stockwork?											
<<Struc: 164.1 - 172: intense Finely laminated/laminated/finely bedded 35 deg. >> Some variability near top of interval to as low as 30 TCA;											
<<Struc: 172 - 185: intense Finely laminated/laminated/finely bedded 40 deg. >> Minor variability;											
<<Struc: 185 - 192: intense Finely laminated/laminated/finely bedded 37 deg. >>											
<<Struc: 192 - 205.5: intense Finely laminated/laminated/finely bedded 35 deg. >>											
	109.90	111.25	1.35	0027287	3	1	0.002	0.01	0.005		
	111.25	113.00	1.75	0027288	4	1	0.003	0.01	0.005		
	113.00	114.50	1.50	0027289	4	1	0.003	0.01	0.005		
	114.50	115.85	1.35	0027290	3	1	0.002	0.01	0.005		
	115.85	117.15	1.30	0027291	4	1	0.012	0.01	0.005		
	117.15	118.80	1.65	0027292	4	1	0.002	0.01	0.005		
	118.80	120.40	1.60	0027294	6	1	0.01	0.01	0.005		
	120.40	121.75	1.35	0027295	8	1	0.003	0.01	0.005		
	121.75	122.50	0.75	0027296	4	1	0.014	0.01	0.005		
	126.25	128.00	1.75	0027297	4	1	0.006	0.01	0.005		
	128.00	130.00	2.00	0027298	4	1	0.007	0.01	0.005		
	130.00	131.00	1.00	0027299	4	1	0.003	0.01	0.005		
	131.00	132.15	1.15	0027300	6	1	0.006	0.01	0.005		
	132.15	134.00	1.85	0035251	5	1	0.011	0.01	0.005		
	134.00	135.85	1.85	0035252	4	1	0.019	0.01	0.005		
	135.85	136.80	0.95	0035253	6	1	0.011	0.01	0.005		
	151.62	153.33	1.71	0035254	3	1	0.005	0.01	0.005		
	153.33	153.72	0.39	0035256	1	1	0.007	0.01	0.005		
	153.72	155.75	2.03	0035257	8	1	0.006	0.01	0.005		



## GeoSpark: Drill Hole Report

Hole: RX-19-01

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	Au Best ppb	Ag Best ppm	Cu Best pct	Pb Best pct	Zn Best pct
			155.75	157.75	2.00	0035258	5	1	0.013	0.01	0.005
			157.75	158.85	1.10	0035259	2	1	0.004	0.01	0.005
			158.85	160.50	1.65	0035260	5	1	0.006	0.01	0.005
			160.50	162.50	2.00	0035261	5	1	0.006	0.01	0.005

End of Hole @ 208.48



## GeoSpark: Drill Hole Report

**Project:** Bull River

**Hole:** RX-19-02

<b>Prospect:</b>	REX	<b>Survey Type:</b>	GPS	<b>Logged By:</b>	Bernie Augsten	<b>Hole Type:</b>	DD
<b>UTM Grid:</b>	NAD83_Z11	<b>Survey By:</b>	J Christmann	<b>Date Started:</b>	2019-08-24	<b>Hole Diameter:</b>	7.57
<b>UTM East:</b>	627993.18	<b>Azimuth:</b>	160	<b>Date Completed:</b>	2019-08-27	<b>Core Size:</b>	NQ2
<b>UTM North:</b>	5474285.67	<b>Dip:</b>	-43	<b>Drill Company:</b>	Lucky	<b>Casing Pulled?:</b>	<input checked="" type="checkbox"/>
<b>UTM Elevation (m):</b>	947	<b>Length (m):</b>	229.82	<b>Drill Rig:</b>	Rig1	<b>Casing Depth (m):</b>	
<b>Local Grid:</b>				<b>Drill Started:</b>	2019-08-05	<b>Reduced (m):</b>	
<b>Local East:</b>				<b>Drill Completed:</b>	2019-08-07	<b>Reduced Size:</b>	
<b>Local North:</b>						<b>Oriented?:</b>	<input type="checkbox"/>
<b>Local Elevation (m):</b>		<b>Comments:</b>	Hole was collared to test for mineralized veining at depth below known surface showings to the southeast, and further south than RX-19-01.				
<b>Hole Status:</b>	Completed	Significant zones of veining were seen as noted below;					
<b>Hole Purpose:</b>	EXPL	138.45 - 155 - broad zone of siderite-qtz +/- pyrrhotite-pyrite (cpy) veining accompanied by strong wallrock bleaching; central zone (140.5 - 144.5) of strongest veining flanked by zones of more or less sheeted veining decreasing in intensity to outer limits of the zone; overall cpy content very low with best estimated chalcopyrite content of 0.3% from 140.5 to 144.5m;					

194.95 - 199.75 - strong quartz +/-po veining and siderite-qtz veining;

210.15 - 211.3 - white coarse grained qtz-siderite +/- po vein;

Depth (m)	Survey Method	Survey By	Date Surveyed	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Mag. Field	Accept Values?	Comments
19.51	EZShot	Jeff	2019-05-08	-43.6	144.6	14.1	158.7	55194	<input checked="" type="checkbox"/>	
77.42	EZShot	Jeff	2019-06-08	-43.8	142.4	14.1	156.5	55425	<input checked="" type="checkbox"/>	
107.89	EZShot	Jeff	2019-06-08	-43.8	143.8	14.1	157.9	55775	<input checked="" type="checkbox"/>	





## GeoSpark: Drill Hole Report

Hole: RX-19-02

Depth (m)	Survey Method	Survey By	Date Surveyed	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Mag. Field	Accept Values?	Comments
190.19	EZShot	Jeff	2019-06-08	-43.8	144.9	14.1	159	55682	<input checked="" type="checkbox"/>	



## GeoSpark: Drill Hole Report

Hole: RX-19-02

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	Au Best ppb	Ag Best ppm	Cu Best pct	Pb Best pct	Zn Best pct
0.00	1.52	OVB									
		Overburden									
1.52	229.82	SLTS									
		Siltstone									
		light grey									
		FG									
<p>Light ot dk grey fine grained to very fine grained interlaminated siltstone (siltite) and argillite; laminations vary from cm-scale to more generally mm to submm thickness; orientation of laminations is generally consistent but varies downhole becoming gentler downhole, as noted; locally see narrow zones of convoluted bedding, eg. 13.2m, 20.7m; sediments contain variable amounts of sulphides, predominantly pyrrhotite, with subordinate pyrite and trace chalcopyrite as described under mineralization; Oxidation as limonite on fxs down to 9.5m;</p> <p>138.45 - 155 - broad zone of siderite-qtz +/- pyrrhotite-pyrite (cpy) veining accompanied by strong wallrock bleaching; central zone (140.5 - 144.5) of strongest veining flanked by zones of more or less sheeted veining decreasing in intensity to outer limits of the zone as noted. (See Section on Veining and Mineralization);</p> <p>194.95 - 199.75 - strong quartz +/-po veining and siderite-qtz veining;</p> <p>210.15 - 211.3 - white coarse grained qtz-siderite +/- po vein;</p> <p>&lt;&lt;Min: 1.52 - 49: 2% pyrrhotite / 0.5% pyrite / 0.1% pyrite&gt;&gt; Pyrrhotite often occurs as rounded lenticular blebs aligned parallel to laminations; also see it as very narrow,(&lt;&lt;1mm), massive, sometimes discontinuous seams, parallel to bedding; po also seen in rare bedding parallel siderite-qtz veinlets; Pyrite mostly as discrete diss grains; more rarely with po in seams; some pyrite as larger rounded coarser grained aggregates;</p> <p>&lt;&lt;Min: 49 - 70: 2% pyrrhotite / 0.3% pyrrhotite / 0.3% pyrite / 0.3% pyrite&gt;&gt;</p> <p>&lt;&lt;Min: 70 - 95: 1% pyrrhotite / 0.5% pyrrhotite / 0.1% pyrite / 0.2% pyrite&gt;&gt;</p> <p>&lt;&lt;Min: 95 - 135: 1.5% pyrrhotite / 0.3% pyrrhotite / 0.1% pyrite&gt;&gt;</p> <p>&lt;&lt;Min: 135 - 138.45: 2% pyrrhotite / 0.7% pyrrhotite / 0.1% pyrite / 0.3% pyrite&gt;&gt;</p> <p>&lt;&lt;Min: 138.45 - 140.5: 0.1% pyrrhotite / 3% pyrrhotite&gt;&gt; Mineralization restricted predominantly to a series of subparallel siderite-qtz veins, becoming stronger toward lower end of interval; wallrock to veins strongly bleached to a pale grey colour; normally strong disseminated pyrrhotite in wallrock largely gone indicating perhaps the pyrrhotite has remobilized into the veins;</p> <p>&lt;&lt;Min: 140.5 - 144.5: 5% pyrrhotite / 0.5% pyrite / 0.3% chalcopyrite&gt;&gt; Chalcopyrite occurs as small irregular grains and blebs along fxs and with pyrrhotite in qtz and siderite-qtz veins;</p> <p>&lt;&lt;Min: 144.5 - 146.5: 4% pyrrhotite / 0.5% pyrite / 0.05% chalcopyrite&gt;&gt;</p> <p>&lt;&lt;Min: 146.5 - 153.5: 2% pyrrhotite / 0.5% pyrrhotite / 0.3% pyrite / 0.1% pyrite&gt;&gt;</p>											

Hole: RX-19-02

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	Au Best ppb	Ag Best ppm	Cu Best pct	Pb Best pct	Zn Best pct
		<<Min: 153.5 - 183.25: 1% pyrrhotite / 1% pyrrhotite / 0.3% pyrite / 0.3% pyrite>> Pyrrhotite is somewhat erratically distributed throughout the rock mass as diss elongated grains parallel to foliation as well as occurring in both bedding parallel and cross-cutting (both minor) siderite+/-qtz veinlets; Pyrite seen in veins with po and as occasional larger med grained irregularly rounded aggregates to 1cm;									
		<<Min: 183.25 - 185.1: 1% pyrrhotite / 0.5% pyrite / 0.05% chalcopyrite>>									
		<<Min: 185.1 - 194.95: 0.5% pyrrhotite / 2% pyrrhotite / 0.7% pyrite / 0.3% pyrite / 0.03% chalcopyrite>> Pyrrhotite occurs diss in the sediments, and in siderite-qtz veins(both crosscutting and bedding parallel) and less commonly as narrow, more massive, 1-3mm crosscutting and bedding parallel veinlets;									
		<<Min: 194.95 - 198.2: 0.5% pyrrhotite / 0.2% pyrite>>									
		<<Min: 198.2 - 199.75: 2% pyrrhotite / 0.3% pyrite / 0.1% chalcopyrite>>									
		<<Min: 199.75 - 210.15: 2% pyrrhotite / 0.3% pyrite / 0.05% chalcopyrite>> Pyrrhotite locally is semi-massive in narrow siderite-qtz veins, although typically blebby diss through the veins often concentrated on vein margins;									
		<<Min: 210.15 - 211.3: 0.5% pyrrhotite>>									
		<<Min: 211.3 - 225.75: 2% pyrrhotite / 0.3% pyrite / 0.05% chalcopyrite>> Rarely pyrrhotite is semi-massive in veins;									
		<<Min: 225.75 - 229.82: 0.5% pyrrhotite / 1% pyrrhotite / 0.5% pyrite / 0.2% pyrite>> Pyrrhotite seen as semi-massive to massive in bedding parallel veins/seams accompanied by minor pyrite;									
		<<Alt: 138.45 - 144.5: moderate to strong Sericitic / weak to moderate Chlorite >>									
		<<Alt: 144.5 - 155: weak to moderate Sericitic>>									
		<<Alt: 194 - 194.95: moderate Sericitic / weak to moderate Bleaching>>									
		<<Alt: 194.95 - 199.75: weak to moderate Chlorite / moderate Sericitic>>									
		<<Alt: 199.75 - 204.5: weak Sericitic>>									
		<<Alt: 208.3 - 220.4: moderate Sericitic>> Rock bleached to a light to med grey colour;									
		<<Vein: 1.52 - 49: 0.5% Siderite-quartz / 0.5% Siderite-quartz / 0.1% Siderite quartz sulphide (pyrrhotite+/-pyrite+/-chalcopyrite)>>									
		<<Vein: 49 - 70: 0.3% Siderite quartz sulphide (pyrrhotite+/-pyrite+/-chalcopyrite) / 0.1% Siderite-quartz>> Crosscutting siderite-qtz occur as narrow veinlets and hairline veinlets; siderite-qtz-sulphide veinlets occur both crosscutting and parallel to laminations with similar characteristics;									
		<<Vein: 70 - 95: 0.8% Siderite quartz sulphide (pyrrhotite+/-pyrite+/-chalcopyrite) / 0.3% Siderite-quartz>> Most siderite-qtz-sulphide veinlets <5mm with one larger one to 10cm, and majority are parallel to laminations;									
		<<Vein: 95 - 135: 0.5% Siderite quartz sulphide (pyrrhotite+/-pyrite+/-chalcopyrite) / 0.2% Siderite-quartz>>									
		<<Vein: 135 - 138.45: 1% Siderite quartz sulphide (pyrrhotite+/-pyrite+/-chalcopyrite)>>									

Hole: RX-19-02

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	Au Best ppb	Ag Best ppm	Cu Best pct	Pb Best pct	Zn Best pct
		<<Vein: 138.45 - 140.5: 4% Siderite quartz sulphide (pyrrhotite+/pyrite+/-chalcopyrite)>>									
		<<Vein: 140.5 - 144.5: 5% Siderite quartz sulphide (pyrrhotite+/pyrite+/-chalcopyrite) / 5% Quartz-Pyrrhotite>> Interval has both siderite-qtz-sulphide veins/fracture-fill and white quartz-pyrrhotite veins mostly forming sheeted arrays; in these don't see any siderite; in places it appears the siderite is later. Veins contain minor pyrite and even less chalcopyrite; Interval includes one massive qtz-po vein (141.62 - 141.76);									
		<<Vein: 144.5 - 146.5: 3% Siderite quartz sulphide (pyrrhotite+/pyrite+/-chalcopyrite) / 3% Quartz-Pyrrhotite>> Series of more or less sheeted qtz-po and siderite-qtz-po veins with minor pyrite and trace chalcopyrite;									
		<<Vein: 146.5 - 153.5: 6% Siderite quartz sulphide (pyrrhotite+/pyrite+/-chalcopyrite)>>									
		<<Vein: 153.5 - 183.25: 0.5% Siderite quartz sulphide (pyrrhotite+/pyrite+/-chalcopyrite) / 0.5% Siderite-quartz>> Siderite-qtz-pyrrhotite-pyrite veins uncommon and occur mostly as bedding parallel veins typically 1-5cm; rare cross-cutting vein of same mineralogy.									
		<<Vein: 183.25 - 185.1: 25% Siderite quartz sulphide (pyrrhotite+/pyrite+/-chalcopyrite)>> Strong zone of veining with some pyrrhotite,pyrite and trace chalcopyrite; veins display some aspects of being 'sheeted' and elsewhere irregularly crosscutting; veins have a zoned or banded look,sometimes manifested by finer grained margins (sulphide enriched) versus a coarser grained core; elsewhere see veins with coarser grained polygonal siderite margins with a finer grained maybe more quartz rich core; generally the quartz appears finer grained than the siderite; Note: in this vein zone the wallrock does not appear bleached or significantly altered as seen elsewhere with strong veining;									
		<<Vein: 185.1 - 194.95: 2% Siderite quartz sulphide (pyrrhotite+/pyrite+/-chalcopyrite) / 0.3% Pyrrhotite>> Siderite-qtz-sulphide (po) veins increase toward the lower end of interval particularly from about 193m onwards; This seems to be the typical mode when approaching strong vein systems;									
		<<Vein: 194.95 - 199.75: 30% Quartz-Pyrrhotite / 15% Siderite quartz sulphide (pyrrhotite+/pyrite+/-chalcopyrite)>> 94.95 - 198.2 - nterval dominated by bull white qtz(+/-po) veining cutting preexisting siderite-qtz +/-sulphide veining; overall sulphide content low dominated by pyrrhotite with some pyrite and trace chalcopyrite; 198.2 - 199.75 - interval dominated by siderite-qtz-po veining; stronger overall po content;									
		<<Vein: 199.75 - 210.15: 3% Siderite quartz sulphide (pyrrhotite+/pyrite+/-chalcopyrite)>>									
		<<Vein: 210.15 - 211.3: 100% Siderite quartz sulphide (pyrrhotite+/pyrite+/-chalcopyrite)>>									
		<<Vein: 211.3 - 225.75: 4% Siderite quartz sulphide (pyrrhotite+/pyrite+/-chalcopyrite)>> Veins are generally small (1-3cm) with one larger one (30cm); sulphides in veins mostly pyrrhotite with minor pyrite and trace cpy.									
		<<Vein: 225.75 - 229.82: 1% Siderite quartz sulphide (pyrrhotite+/pyrite+/-chalcopyrite)>>									
		<<Struc: 1.52 - 58: strong Finely laminated/laminated/finely bedded 63 deg. >> Locally variable from 53-70 but averages around 63 TCA;									
		<<Struc: 58 - 61: strong Finely laminated/laminated/finely bedded 50 deg. >>									



## GeoSpark: Drill Hole Report

Hole: RX-19-02

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	Au Best ppb	Ag Best ppm	Cu Best pct	Pb Best pct	Zn Best pct
		<<Struc: 61 - 73.5: moderate to strong Finely laminated/laminated/finely bedded 43 deg. >> locally over 50m to 28 TCA;									
		<<Struc: 73.5 - 88: strong Finely laminated/laminated/finely bedded 50 deg. >> Variable from 46 to 53 TCA; Note: 87.3 - 88 - convoluted laminations;									
		<<Struc: 88 - 95.1: strong Finely laminated/laminated/finely bedded 28 deg. >>									
		<<Struc: 95.1 - 96.7: strong Finely laminated/laminated/finely bedded 0 deg. >> Somewhat convoluted;									
		<<Struc: 96.7 - 106.5: strong Finely laminated/laminated/finely bedded 27 deg. >> Quite variable lamination orientations ranging from 13 - 42 TCA;									
		<<Struc: 106.5 - 108.4: strong Finely laminated/laminated/finely bedded 0 deg. >> Locally fluctuates to 8 TCA;									
		<<Struc: 108.4 - 113.7: strong Finely laminated/laminated/finely bedded 12 deg. >> Variable between 9-17 TCA;									
		<<Struc: 113.7 - 115.1: strong Finely laminated/laminated/finely bedded 0 deg. >>									
		<<Struc: 115.1 - 123.85: strong Finely laminated/laminated/finely bedded 20 deg. >> Some local variations to 12 TCA;									
		<<Struc: 123.85 - 133.8: strong Finely laminated/laminated/finely bedded 12 deg. >>									
		<<Struc: 135.7 - 140.2: moderate to strong Finely laminated/laminated/finely bedded 0 deg. / moderate to strong Veining - fracture fill 50 deg. >> Increasing density of veining toward lower end of interval; vein orientations range from 35 to 65 and look like on average steeper toward lower end of interval.									
		<<Struc: 141.62 - 141.77: intense Veining - fracture fill 45 deg. >> Massive white qtz-po vein;									
		<<Struc: 143.9 - 144.5: moderate to strong Veining - fracture fill 60 deg. >> Series of sheeted qtz-po and siderite-qtz-sulphide veins; orientation somewhat variable but average close to 60 TCA;									
		<<Struc: 146.5 - 151.25: strong Finely laminated/laminated/finely bedded 35 deg. / weak to moderate Veining - fracture fill 70 deg. >>									
		<<Struc: 151.35 - 173.5: strong Finely laminated/laminated/finely bedded 25 deg. >> Minor variability;									
		<<Struc: 173.5 - 180: strong Finely laminated/laminated/finely bedded 30 deg. >>									
		<<Struc: 180 - 187: strong Finely laminated/laminated/finely bedded 30 deg. >>									
		<<Struc: 187 - 199.75: strong Finely laminated/laminated/finely bedded 35 deg. >>									
		<<Struc: 199.75 - 210.15: strong Finely laminated/laminated/finely bedded 35 deg. / weak to moderate Veining - fracture fill 45 deg. >> Some variation in laminations; sheeted veining varies from 35 to 50 TCA but typically around 45 TCA;									
		<<Struc: 210.15 - 211.3: intense Veining - fracture fill 45 deg. >> Massive cg white quartz-siderite-po vein;									



## GeoSpark: Drill Hole Report

Hole: RX-19-02

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	Au Best ppb	Ag Best ppm	Cu Best pct	Pb Best pct	Zn Best pct
<<Struc: 211.3 - 225.75: weak to moderate Finely laminated/laminated/finely bedded 45 deg. / weak to moderate Veining - fracture fill 45 deg. >> Local variations in laminations to 25 TCA; sheeted veining somewhat variable but averages around 45 TCA;											
<<Struc: 225.75 - 229.82: strong Finely laminated/laminated/finely bedded 45 deg. >>											
	138.45		139.60	1.15		0027264	5	1	0.008	0.01	0.005
	139.60		140.50	0.90		0027266	4	1	0.008	0.01	0.005
	140.50		141.50	1.00		0027267	4	1	0.025	0.01	0.005
	141.50		142.50	1.00		0027268	6	1	0.025	0.01	0.005
	142.50		143.50	1.00		0027269	12	1	0.009	0.01	0.005
	143.50		144.50	1.00		0027270	22	1	0.019	0.01	0.005
	144.50		146.50	2.00		0027271	8	1	0.01	0.01	0.005
	183.25		185.10	1.85		0027272	4	1	0.005	0.01	0.005
	194.95		196.00	1.05		0027274	4	1	0.0005	0.01	0.005
	196.00		197.00	1.00		0027275	6	1	0.067	0.01	0.005
	197.00		198.20	1.20		0027276	8	1	0.0005	0.01	0.01
	198.20		199.75	1.55		0027277	124	1	0.01	0.01	0.005
	203.80		204.80	1.00		0027278	7	1	0.006	0.01	0.005
	210.15		211.30	1.15		0027279	4	1	0.005	0.01	0.005
	211.30		213.00	1.70		0027280	6	1	0.015	0.01	0.005
	213.00		215.00	2.00		0027281	13	1	0.011	0.01	0.005
	215.00		217.00	2.00		0027282	14	1	0.014	0.01	0.005
	221.20		223.00	1.80		0027283	9	1	0.008	0.01	0.005
	223.00		224.50	1.50		0027284	6	1	0.007	0.01	0.005
	224.50		225.75	1.25		0027286	4	1	0.006	0.01	0.005

End of Hole @ 229.82

**Project:** Bull River

**Hole:** RX-19-03

<b>Prospect:</b>	REX	<b>Survey Type:</b>	GPS	<b>Logged By:</b>	Bernie Augsten	<b>Hole Type:</b>	DD
<b>UTM Grid:</b>	NAD83_Z11	<b>Survey By:</b>	J Christmann	<b>Date Started:</b>	2019-08-20	<b>Hole Diameter:</b>	7.57
<b>UTM East:</b>	627993.18	<b>Azimuth:</b>	160	<b>Date Completed:</b>	2019-08-24	<b>Core Size:</b>	NQ2
<b>UTM North:</b>	5474285.67	<b>Dip:</b>	-25	<b>Drill Company:</b>	Lucky	<b>Casing Pulled?:</b>	<input checked="" type="checkbox"/>
<b>UTM Elevation (m):</b>	947	<b>Length (m):</b>	244.75	<b>Drill Rig:</b>	Rig1	<b>Casing Depth (m):</b>	
<b>Local Grid:</b>				<b>Drill Started:</b>	2019-08-20	<b>Reduced (m):</b>	
<b>Local East:</b>				<b>Drill Completed:</b>	2019-08-24	<b>Reduced Size:</b>	
<b>Local North:</b>						<b>Oriented?:</b>	<input type="checkbox"/>
<b>Local Elevation (m):</b>							
<b>Hole Status:</b>	Completed	<b>Comments:</b>					
<b>Hole Purpose:</b>	EXPL	<p>Hole was collared to test the updip potential of veining and mineralization seen in RX-19-02. Several zones of siderite-qtz-sulphide veining were intersected as noted with overall trace to low chalcopyrite;</p> <p>76.6 - 82.15 - interval of moderate qtz-siderite-pyrrhotite-pyrite veining;</p> <p>132.05 - 175.05 - zone of semi-continuous siderite-qtz-pyrrhotite-pyrite +/- chalcopyrite veining in the form of sheeted veining weak stockwork and massive large veins; locally veins contain small amounts of chalcopyrite; interval includes several sections of poorly veined sediments; the host siltstones are more weakly laminated which may be in part due to alteration; rocks are bleached to a paler grey to grey/green (sericitized);</p> <p>182.9 - 185.8 - interval with strong (12%), more or less sheeted siderite-qtz-sulphide veins;</p>					

Depth (m)	Survey Method	Survey By	Date Surveyed	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Mag. Field	Accept Values?	Comments
16.46	EZShot	Jeff	2019-07-08	-24.9	141.8	14.1	155.9	55339	<input checked="" type="checkbox"/>	
46.63	EZShot	Jeff	2019-08-08	-23.6	135.7	14.1	149.8	55522	<input checked="" type="checkbox"/>	
77.11	EZShot	Jeff	2019-08-08	-26.2	141.2	14.1	155.3	55397	<input checked="" type="checkbox"/>	



## GeoSpark: Drill Hole Report

Hole: RX-19-03

Depth (m)	Survey Method	Survey By	Date Surveyed	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Mag. Field	Accept Values?	Comments
107.59	EZShot	Jeff	2019-08-08	-27.2	144.5	14.1	158.6	56273	<input checked="" type="checkbox"/>	
138.37	EZShot	Jeff	2019-08-08	-27	143.9	14.1	158	56146	<input checked="" type="checkbox"/>	



Hole: RX-19-03

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	Au Best ppb	Ag Best ppm	Cu Best pct	Pb Best pct	Zn Best pct
0.00	3.05	OVB Overburden									
3.05	244.75	SLTS Siltstone									
		light grey FG									
<p>Uniformly bedded, intercalated sequence of lighter grey fine grained siltstones(siltite) and dk grey to black very fine grained argillite; rock mass only weakly oxidized (limonite on fxs) to about 23m; bedding varies from cm-scale to more typically fine layering (often &lt;1mm); Locally see nicely developed load casts and flame structures (60.55m) indicating stratigraphy right side up.</p> <p>65.1 - 68.25- interval of moderate shearing/block faulting within predominantly darker grey more graphitic argillite; laminations are more distorted and erratic;</p> <p>68.25 - 72.4 - uniformly and finely laminated at 30 TCA;</p> <p>72.4 - 82.15 - finely laminated sediments have been locally disrupted with rotated blocks of sediments; orientation of laminations variably because of this;</p> <p>76.6 - 82.15 - interval of moderate qtz-siderite-pyrrhotite-pyrite veining (both bedding parallel and cross-cutting); See Veining;</p> <p>82.15 - 113+ - uniformly and finely laminated (&lt;1mm) at about 40 TCA;</p> <p>@113m - very sharp structural disconformity where bedding angles flatten below this point and become less consistent;</p> <p>113 - 131.37 - variable orientations to laminations as noted under Structures;</p> <p>131.37 - 132.05 - chloritic/graphitic shear with strong fine siderite veinlets; this shear essentially marks the upper contact of the zone of strong stockwork siderite-qtz +/- sulphide veining;</p> <p>132.05 - 175.05 - zone of semi-continuous siderite-qtz-pyrrhotite-pyrite +/- chalcopyrite veining in the form of sheeted veining weak stockwork and massive large veins; locally veins contain small amounts of chalcopyrite; interval includes several sections of poorly veined sediments; the host siltstones are more weakly laminated which may be in part due to alteration; rocks are bleached to a paler grey to grey/green (sericitized);</p> <p>182.9 - 185.8 - interval with strong (12%),more or less sheeted siderite-qtz-sulphide veins;</p> <p>185.8 - 244.75 - more or less uniformly finely laminated; rare siderite-qtz-sulphides veins; competent rock;</p>											

Hole: RX-19-03

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	Au Best ppb	Ag Best ppm	Cu Best pct	Pb Best pct	Zn Best pct
		<<Min: 3.05 - 65.1: 2% pyrrhotite / 1% pyrrhotite / 0.5% pyrite>> Sulphides dominated by pyrrhotite with lesser pyrite; pyrrhotite occurs as disseminated grains and blebs commonly within the lighter silty laminae; also see pyrrhotite as narrow, <1mm, massive to semi-massive bedding parallel aggregates or seams often forming at the contact between light grey silty laminae and darker grey argillaceous laminae; Pyrite less common than pyrrhotite occurring similarly in narrow seams as semi-massive aggregates usually with pyrrhotite and as rare isolated larger aggregates;									
		<<Min: 65.1 - 68.25: 1% pyrite / 0.5% pyrite / 0.5% pyrrhotite>> Pyrite exceeds pyrrhotite in this distorted/faulted? Interval;									
		<<Min: 68.25 - 76.6: 2% pyrrhotite / 0.5% pyrite>> Pyrrhotite occurs mostly as fine to coarse diss blebs; minor po in rare siderite-qtz stringer;									
		<<Min: 76.6 - 82.15: 3% pyrrhotite / 0.5% pyrrhotite / 2% pyrrhotite / 0.5% pyrite / 0.1% pyrite>> Pyrrhotite occurs in siderite-qtz veins and semi-massive aggregates and blebs as well as variably sized diss blebs in the host rock and as narrow sulphide only veinlets with pyrite. Pyrite is a lesser constituent of siderite-qtz veins;									
		<<Min: 82.15 - 114: 2% pyrrhotite / 0.3% pyrrhotite / 0.3% pyrite / 0.05% pyrite>> Pyrrhotite occurs most commonly as fine to coarse diss blebs and grains, coarser blebs are elongated parallel to laminations; Po also occurs as semi-massive to massive aggregates in siderite-qtz veins;									
		<<Min: 114 - 131.37: 1% pyrrhotite / 0.3% pyrrhotite / 0.1% pyrite / 0.1% pyrite>>									
		<<Min: 131.37 - 132.05: 0.5% pyrrhotite / 0.5% pyrite / 0.1% pyrite>>									
		<<Min: 132.05 - 150.67: 2% pyrrhotite / 0.05% pyrite / 0.1% chalcopyrite / 0.5% pyrrhotite / 0.5% pyrrhotite>> Sulphides dominated by pyrrhotite with subordinate pyrite and chalcopyrite; most pyrrhotite in siderite-qtz veins; also see some as very narrow massive lamination parallel seams/veinlets? And as elongated blebs parallel to foliation; much less diss in wallrock overall (possible wallrock pyrrhotite mobilized into veins);									
		<<Min: 150.67 - 152: 4% pyrrhotite / 0.5% chalcopyrite / 0.2% pyrite>> Sulphides mostly occur as blebs, grains, small masses along fractures in vein.									
		<<Min: 152 - 156.55: 3% pyrrhotite / 0.5% pyrite / 0.1% chalcopyrite>> Most sulphides occur in siderite-qtz veins and veinlets; narrow, (1-2mm) veinlets often mostly massive po, py; overall rare cpy; Interestingly little sulphides in wallrock, perhaps indicating that the pyrrhotite seen in veins has been remobilized from the wallrock;									
		<<Min: 156.55 - 160.5: 2% pyrrhotite / 0.06% chalcopyrite>> Most pyrrhotite occurs in bedding parallel seams (<2mm) with minor in crosscutting siderite-qtz veins; cpy occurs as small isolated grains (1mm) within pyrrhotite seams.									
		<<Min: 160.5 - 162.5: 3% pyrrhotite / 0.05% chalcopyrite>>									
		<<Min: 162.5 - 165.5: 4% pyrrhotite / 0.1% chalcopyrite / 0.5% pyrite>> Sulphides occur within siderite-qtz veins along fractures as discreet grains and masses and often on vein margins;									

Hole: RX-19-03

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	Au Best ppb	Ag Best ppm	Cu Best pct	Pb Best pct	Zn Best pct
		<<Min: 165.5 - 172.05: 1% pyrrhotite / 2% pyrrhotite / 0.3% pyrite / 0.05% chalcopyrite>> Pyrrhotite and lesser pyrite and trace cpy occur in siderite-qtz veins and within the host siltstones as narrow lamination parallel seams;									
		<<Min: 172.05 - 172.4: 4% pyrrhotite / 0.5% pyrite / 1% chalcopyrite>> Pyrrhotite occurs as irregular fracture-controlled aggregates within siderite-qtz veins with lesser chalcopyrite; chalcopyrite occurs as irregular blebs, diss within the veins spatially associated with pyrrhotite;									
		<<Min: 172.4 - 175.05: 1% pyrrhotite / 2% pyrrhotite / 0.3% pyrite / 0.05% chalcopyrite>>									
		<<Min: 175.05 - 182.9: 2% pyrrhotite / 0.3% pyrrhotite / 0.05% chalcopyrite>> Pyrrhotite seen in sediments as discreet irregular grains, and as narrow massive to semi-massive bands parallel to laminations; trace cpy seen in these bands as well. Pyrrhotite in rare siderite-qtz veins;									
		<<Min: 182.9 - 185.8: 2% pyrrhotite / 0.5% pyrite / 0.05% chalcopyrite>>									
		<<Min: 185.8 - 244.75: 2% pyrrhotite / 0.3% pyrite>> Pyrrhotite is dominant sulphide as diss elongated grains parallel to laminations, more massive narrow seams parallel to laminations and some in rare siderite-qtz veins; Pyrite seen as rare larger irregular rounded masses;									
		<<Alt: 132.05 - 150.67: moderate Sericitic / moderate Bleaching>> Bleaching may be a result of sericite; (no carbonate alteration); no alteration at vein margins;									
		<<Vein: 3.05 - 65.1: 0.3% Siderite-quartz / 0.05% Siderite quartz sulphide (pyrrhotite+/pyrite+/-chalcopyrite)>> Very minor veining in interval, predominantly as hairline to narrow cross-cutting siderite-quartz veinlets, locally forming very fine stockworks; also see rare siderite-quartz-pyrite veinlet;									
		<<Vein: 65.1 - 68.25: 1% Siderite-quartz>>									
		<<Vein: 68.25 - 76.6: 0.5% Siderite-quartz / 0.1% Siderite quartz sulphide (pyrrhotite+/pyrite+/-chalcopyrite) / 0.05% Siderite-quartz>>									
		<<Vein: 76.6 - 82.15: 5% Siderite quartz sulphide (pyrrhotite+/pyrite+/-chalcopyrite) / 0.3% Pyrrhotite>>									
		<<Vein: 82.15 - 131.37: 0.1% Siderite quartz sulphide (pyrrhotite+/pyrite+/-chalcopyrite) / 0.05% Siderite-quartz>> Rare siderite-qtz-po-py veins usually parallel to laminations but see some cross-cutting;									
		<<Vein: 131.37 - 132.05: 3% Siderite-quartz>>									
		<<Vein: 132.05 - 150.67: 6% Siderite quartz sulphide (pyrrhotite+/pyrite+/-chalcopyrite) / 0.5% Siderite-quartz>> Majority of the siderite-qtz-sulphide veins are subparallel from 65 to 90 TCA forming a sheeted array, eg. 140 - 142m; elsewhere they do form weak stockworks; sheeted veins range in width from about 10cm to 1-2mm but typically in the 1-2cm range; crosscutting relationships are rare but do see one quartz+/-siderite vein(finer grained) cutting coarse grained quartz-siderite+/-sulphide vein;									

Hole: RX-19-03

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	Au Best ppb	Ag Best ppm	Cu Best pct	Pb Best pct	Zn Best pct
		<<Vein: 150.67 - 152: 100% Siderite quartz sulphide (pyrrhotite+/pyrite+/-chalcopyrite)>> Vein consists of coarse grained white to cream to beige (slightly oxidized) siderite crystals and white coarse grained quartz. Locally well developed interstitial med green chlorite; vein is crudely zoned with more siderite dominant for the first 50cm, and more quartz dominant for the remainder. Sulphides consist mainly of pyrrhotite with subordinate chalcopyrite and pyrite; upper contact irregular at about 65 TCA and manifested by a irregular but fairly sharp contact between coarse grained siderite and med green strongly chloritized wallrock; lower contact is marked by a 10cm zone of strongly altered wallrock and irregular veining and stockwork but is generally unambiguous at about 35 TCA; massive part of vein probably ends about 10cm higher in core.									
		<<Vein: 152 - 156.55: 6% Siderite quartz sulphide (pyrrhotite+/pyrite+/-chalcopyrite)>> Siderite-quartz+/-sulphide veins here form more of a discontinuous stockwork rather than sheeted veins;									
		<<Vein: 156.55 - 160.5: 0.5% Siderite quartz sulphide (pyrrhotite+/pyrite+/-chalcopyrite)>> Very weak veining; rock is bleached with uniform laminations;									
		<<Vein: 160.5 - 162.5: 4% Siderite quartz sulphide (pyrrhotite+/pyrite+/-chalcopyrite)>> Veins mainly form a rough sheeted array as seen higher up in hole; minor stockwork;									
		<<Vein: 162.5 - 165.5: 54% Siderite quartz sulphide (pyrrhotite+/pyrite+/-chalcopyrite)>> Veins actually range in size from <1mm to 70cm; some veins display some brecciated textures manifested by inclusions of angular wallrock;									
		<<Vein: 165.5 - 172.05: 4% Siderite quartz sulphide (pyrrhotite+/pyrite+/-chalcopyrite) / 0.5% Siderite-quartz>>									
		<<Vein: 172.05 - 172.4: 57% Siderite quartz sulphide (pyrrhotite+/pyrite+/-chalcopyrite) / 25% Siderite-quartz>> Narrow interval of strong siderite-quartz-sulphide veining cut by a barren more cream coloured finer grained siderite-quartz veining;									
		<<Vein: 172.4 - 175.05: 9% Siderite quartz sulphide (pyrrhotite+/pyrite+/-chalcopyrite) / 1% Siderite-quartz>> Several high angle (60-85 TCA) siderite-qtz-po +/-py +/-tr.cpy veins cut locally by finer grained siderite-qtz veining;									
		<<Vein: 175.05 - 182.9: 0.4% Siderite quartz sulphide (pyrrhotite+/pyrite+/-chalcopyrite)>>									
		<<Vein: 182.9 - 185.8: 12% Siderite quartz sulphide (pyrrhotite+/pyrite+/-chalcopyrite)>> Series of spaced subparallel coarse grained siderite-qtz+/- pyrrhotite,pyrite; veins cut bedding at high angles varying from 60-85 TCA; veins range in size from <1mm to 15cm, most <1cm; similar to veins seen elsewhere in hole; Intergrown siderite/qtz within the veins often have a sort of 'polygonal' texture with grain boundaries outlined by a fine dk grey/green chlorite?; sulphides within veins sometimes occur at grain boundaries (possible microfractures occur there) and often at vein margins;									
		<<Vein: 185.8 - 244.75: 0.1% Siderite quartz sulphide (pyrrhotite+/pyrite+/-chalcopyrite) / 0.5% Siderite-quartz>>									
		<<Struc: 3.05 - 65.1: strong Finely laminated/laminated/finely bedded 45 deg. >> Very uniformly laminated.									
		<<Struc: 65.1 - 68.25: weak to moderate Fault 20 deg. >> Low angle faulting with some graphite development on slip surfaces;									
		<<Struc: 68.25 - 72.4: strong Finely laminated/laminated/finely bedded 30 deg. >>									



## GeoSpark: Drill Hole Report

Hole: RX-19-03

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	Au Best ppb	Ag Best ppm	Cu Best pct	Pb Best pct	Zn Best pct
		<<Struc: 82.15 - 113: intense Finely laminated/laminated/finely bedded 40 deg. >> Very minor variations to laminations, locally to 35 TCA;									
		<<Struc: 113 - 116.75: strong Finely laminated/laminated/finely bedded 27 deg. >>									
		<<Struc: 116.75 - 118.1: strong Finely laminated/laminated/finely bedded 20 deg. >>									
		<<Struc: 118.1 - 119.8: strong Finely laminated/laminated/finely bedded 10 deg. >>									
		<<Struc: 119.8 - 121.8: strong Finely laminated/laminated/finely bedded 0 deg. >>									
		<<Struc: 121.8 - 123.5: strong Finely laminated/laminated/finely bedded 10 deg. >>									
		<<Struc: 123.5 - 129.7: strong Finely laminated/laminated/finely bedded 22 deg. >>									
		<<Struc: 129.7 - 131.37: strong Finely laminated/laminated/finely bedded 7 deg. >>									
		<<Struc: 131.37 - 132.05: strong Sheared 55 deg. >>									
		<<Struc: 147.6 - 148.8: weak to moderate Finely laminated/laminated/finely bedded 48 deg. >>									
		<<Struc: 150.67 - 152: intense Veining - fracture fill 35 deg. >> Massive siderite-qtz-pyrrhotite+/-pyrite+/-chalcopyrite vein; upper contact somewhat irregular; lower contact appears to be 35 TCA;									
		<<Struc: 156.55 - 160.5: moderate Finely laminated/laminated/finely bedded 22 deg. >>									
		<<Struc: 166.4 - 168.7: moderate to strong Finely laminated/laminated/finely bedded 20 deg. >> Some variability;									
		<<Struc: 169 - 170.6: moderate to strong Finely laminated/laminated/finely bedded 25 deg. >> Some variability									
		<<Struc: 170.9 - 175: weak to moderate Finely laminated/laminated/finely bedded 30 deg. >> local variability over short distances;									
		<<Struc: 175 - 182.9: strong Finely laminated/laminated/finely bedded 25 deg. >> Some variability in lamination orientations from about 22 - 30 but overall around 25 TCA;									
		<<Struc: 182.9 - 185.8: moderate to strong Veining - fracture fill 65 deg. / moderate to strong Finely laminated/laminated/finely bedded 25 deg. >>									
		<<Struc: 185.8 - 244.75: strong Finely laminated/laminated/finely bedded 25 deg. >> Some local variability from 20 to 30 TCA; local see some slump folding?									
			132.05	134.00	1.95	0027234	4	1	0.007	0.01	0.005
			134.00	136.00	2.00	0027235	3	1	0.006	0.01	0.005
			136.00	138.00	2.00	0027236	3	1	0.007	0.01	0.005
			138.00	140.00	2.00	0027237	11	1	0.011	0.01	0.005
			140.00	142.00	2.00	0027238	4	1	0.016	0.01	0.005
			142.00	144.00	2.00	0027239	5	1	0.014	0.01	0.005



## GeoSpark: Drill Hole Report

Hole: RX-19-03

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	Au Best ppb	Ag Best ppm	Cu Best pct	Pb Best pct	Zn Best pct
			144.00	146.00	2.00	0027240	6	1	0.023	0.01	0.005
			146.00	148.00	2.00	0027241	8	1	0.029	0.01	0.005
			148.00	149.00	1.00	0027242	6	1	0.022	0.01	0.005
			149.00	150.67	1.67	0027243	4	1	0.019	0.01	0.005
			150.67	152.00	1.33	0027245	6	1	0.023	0.01	0.005
			152.00	154.00	2.00	0027246	4	1	0.006	0.01	0.005
			154.00	155.10	1.10	0027247	7	1	0.016	0.01	0.005
			155.10	156.55	1.45	0027248	27	1	0.027	0.01	0.005
			156.55	158.50	1.95	0027249	5	1	0.01	0.01	0.005
			158.50	160.50	2.00	0027250	6	1	0.009	0.01	0.005
			160.50	162.50	2.00	0027251	74	1	0.009	0.01	0.005
			162.50	163.50	1.00	0027252	59	1	0.011	0.01	0.005
			163.50	164.50	1.00	0027254	34	1	0.085	0.01	0.01
			164.50	165.50	1.00	0027255	81	1	0.099	0.01	0.005
			165.50	167.50	2.00	0027256	10	1	0.013	0.01	0.005
			167.50	169.50	2.00	0027257	9	1	0.015	0.01	0.005
			169.50	172.05	2.55	0027258	7	1	0.019	0.01	0.005
			172.05	172.40	0.35	0027259	113	12	0.651	0.01	0.02
			172.40	174.00	1.60	0027260	6	1	0.008	0.01	0.005
			174.00	175.05	1.05	0027261	4	1	0.008	0.01	0.005
			182.90	184.50	1.60	0027262	4	1	0.005	0.01	0.005
			184.50	185.80	1.30	0027263	6	1	0.004	0.01	0.005

End of Hole @ 244.75

**Project:** Bull River

**Hole:** RX-19-04

<b>Prospect:</b>	REX	<b>Survey Type:</b>	GPS	<b>Logged By:</b>	Bernie Augsten	<b>Hole Type:</b>	DD
<b>UTM Grid:</b>	NAD83_Z11	<b>Survey By:</b>	J Christmann	<b>Date Started:</b>	2019-08-27	<b>Hole Diameter:</b>	7.57
<b>UTM East:</b>	627987	<b>Azimuth:</b>	242	<b>Date Completed:</b>	2019-08-29	<b>Core Size:</b>	NQ2
<b>UTM North:</b>	5474282	<b>Dip:</b>	-35	<b>Drill Company:</b>	Lucky	<b>Casing Pulled?:</b>	<input checked="" type="checkbox"/>
<b>UTM Elevation (m):</b>	947	<b>Length (m):</b>	252.98	<b>Drill Rig:</b>	Rig1	<b>Casing Depth (m):</b>	
<b>Local Grid:</b>				<b>Drill Started:</b>	2019-08-27	<b>Reduced (m):</b>	
<b>Local East:</b>				<b>Drill Completed:</b>	2019-08-29	<b>Reduced Size:</b>	
<b>Local North:</b>						<b>Oriented?:</b>	<input type="checkbox"/>
<b>Local Elevation (m):</b>		<b>Comments:</b>	Hole was collared to target a magnetic anomaly to the southwest. The hole cut a monotonous sequence of siltstones and argillites mineralized with disseminated, blebby pyrrhotite and lesser pyrite; no veining of importance was intersected.				
<b>Hole Status:</b>	Completed		No samples were taken in this hole.				
<b>Hole Purpose:</b>	EXPL						

Depth (m)	Survey Method	Survey By	Date Surveyed	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Mag. Field	Accept Values?	Comments
7.01	EZShot	Jeff	2019-08-12	-34.7	229.6	14.1	243.7	55353	<input checked="" type="checkbox"/>	Data recorded in Geospark is from a multishot done at EOH. Individual surveys acquired during drilling contained magnetic fluctuations causing inaccurate azimuth readings.
67.97	EZShot	Jeff	2019-08-12	-34.7	230.9	14.1	245	55377	<input checked="" type="checkbox"/>	
128.92	EZShot	Jeff	2019-08-12	-34.7	232.8	14.1	246.9	55354	<input checked="" type="checkbox"/>	
189.88	EZShot	Jeff	2019-08-12	-34.8	233.9	14.1	248	55358	<input checked="" type="checkbox"/>	



# GeoSpark: Drill Hole Report

Hole: RX-19-04

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	Au Best ppb	Ag Best ppm	Cu Best pct	Pb Best pct	Zn Best pct
0.00	3.96	OVB									
		Overburden									
3.96	145.45	SLTS									
		Siltstone									
		light grey									
<p>Well bedded, intercalated lighter grey siltstone (fine to very fine grained) and dker grey to black argillite (fine to very fine grained);            Weak oxidation manifested as limonite on fractures to about 19m downhole;            Rock mass fairly uniformly laminated through most of hole; locally see some sediment deformation, slumping, flame structures, rip-up clast;            Generally rock fine to very fine grained, locally see some coarse wacke or grit, eg.85.4 - 85.6m;            Overall the rock mass is well laminated with mm-cm-scale laminations; locally see some decimeter scale more massive slightly coarser beds, eg. 116.4 - 116.9m;            Rock mass appears to become more argillite-rich toward lower end of interval;</p> <p>11.05 - 11.83 - FAULT; med grey clay-rich fault; completely milled; no associated sulphides;            &lt;&lt;Min: 3.96 - 11.05: 3% pyrrhotite / 0.5% pyrite&gt;&gt; Pyrrhotite occurs as diss? Elongated blebs/grains aligned with laminations and often concentrated in specific (often lighter grey siltier) laminae;            Pyrite seen as larger, somewhat coarser grained irregular-rounded masses seemingly randomly distributed in the sediments;            &lt;&lt;Min: 11.05 - 11.83: 3% pyrrhotite&gt;&gt; Fault contains same pyrrhotite content more or less as unfaulted sedsl            &lt;&lt;Min: 11.83 - 145.45: 3% pyrrhotite / 0.5% pyrrhotite / 0.3% pyrite&gt;&gt; Coarse diss blebs of pyrrhotite often concentrated in certain laminae, often lighter grey ones;; some narrow, &lt;1mm, semi-massive to massive, bedding parallel seams of pyrrhotite;            Rare irregular larger aggregates of coarser grained pyrite;            &lt;&lt;Vein: 3.96 - 145.45: 0.5% Siderite-quartz&gt;&gt; Locally fine siderite-qtz gashes up to 2% over 10-15cm;            &lt;&lt;Struc: 3.96 - 11.05: strong Finely laminated/laminated/finely bedded 40 deg. &gt;&gt; Somewhat variable from 36 to 43 TCA;            &lt;&lt;Struc: 11.05 - 11.83: intense Fault 47 deg. &gt;&gt; Upper contact of fault sharp; lower contact obscured by rubble;            &lt;&lt;Struc: 11.83 - 19.25: strong Finely laminated/laminated/finely bedded 35 deg. &gt;&gt;            &lt;&lt;Struc: 19.25 - 23.5: strong Finely laminated/laminated/finely bedded 30 deg. &gt;&gt; Variable between 28 and 32 TCA;            &lt;&lt;Struc: 23.5 - 24.4: strong Finely laminated/laminated/finely bedded 52 deg. &gt;&gt;            &lt;&lt;Struc: 24.4 - 41: strong Finely laminated/laminated/finely bedded 30 deg. &gt;&gt;            &lt;&lt;Struc: 41 - 41.9: strong Finely laminated/laminated/finely bedded 35 deg. &gt;&gt;            &lt;&lt;Struc: 41.9 - 134.4: strong Finely laminated/laminated/finely bedded 40 deg. &gt;&gt;            &lt;&lt;Struc: 134.4 - 145.45: strong Finely laminated/laminated/finely bedded 30 deg. &gt;&gt;</p>											



Hole: RX-19-04

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	Au Best ppb	Ag Best ppm	Cu Best pct	Pb Best pct	Zn Best pct
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**145.45 178.50 ARGL Argillite black FG**

Interval is considerably more argillite rich with subordinate lighter grey siltstone; locally well-developed graphite on slip/laminae surfaces;

145.45 - 146.2 - sheared and broken up argillite; well-developed graphitic slips;

<<Min: 145.45 - 178.5: 0.5% pyrrhotite / 1.5% pyrrhotite / 1.5% pyrite / 0.3% pyrite / 0.5% pyrite>> Pyrrhotite and pyrite both seen as semi-massive aggregates in bedding parallel seams with or without siderite; these are typically <1cm;

<<Vein: 145.45 - 178.5: 2% Siderite-quartz / 0.5% Siderite quartz sulphide (pyrrhotite+pyrite+/-chalcopyrite)>> siderite/-qtz-po-py 'veins' are more like bedding parallel segregations versus true veins;

<<Struc: 145.45 - 146.2: moderate to strong Sheared 25 deg. >>

<<Struc: 146.2 - 156.85: strong Finely laminated/laminated/finely bedded 30 deg. >>

<<Struc: 156.85 - 166.1: strong Finely laminated/laminated/finely bedded 35 deg. >>

<<Struc: 166.1 - 169.3: strong Finely laminated/laminated/finely bedded 30 deg. >>

<<Struc: 169.3 - 186: moderate to strong Finely laminated/laminated/finely bedded 35 deg. >> Some variability locally from 25 - 40 TCA

**178.50 252.98 SLTS Siltstone light grey FG**

Intercalated sequence of very thinly bedded (overall) light grey siltstone with dk grey to black argillite as seen higher up in the hole; graphitic slips common along partings in argillite laminae; locally see some thick bedded massive light grey, slightly coarser siltstones;

238 - 242.2 - rock mass strongly fractured, locally faulted with well-developed siderite+/-qtz stringers; rock bleached somewhat to a lighter grey; no increase in sulphides;

<<Min: 178.5 - 236.4: 3% pyrrhotite / 0.3% pyrrhotite / 0.5% pyrite / 0.3% pyrite>>

<<Min: 236.4 - 242.2: 0.5% pyrrhotite>>

<<Min: 242.2 - 252.98: 1.5% pyrrhotite / 3% pyrrhotite / 0.3% pyrite>> Pyrrhotite common in narrow bedding parallel seams as clusters of irregular aggregates along a bedding plane or a semi-massive to massive, 1-2mm seam sometimes with siderite;

<<Vein: 178.5 - 236.4: 1% Siderite-quartz / 0.3% Siderite quartz sulphide (pyrrhotite+pyrite+/-chalcopyrite)>> Some hairline siderite-qtz stringers as well; minor siderite-qtz-po-py 'veins' parallel to laminations;

<<Vein: 236.4 - 242.2: 4% Siderite-quartz>>

<<Vein: 242.2 - 252.98: 2% Siderite-quartz>>

<<Struc: 186 - 222.5: moderate to strong Finely laminated/laminated/finely bedded 30 deg. >>



## GeoSpark: Drill Hole Report

Hole: RX-19-04

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	Au Best ppb	Ag Best ppm	Cu Best pct	Pb Best pct	Zn Best pct
		<<Struc: 222.5 - 239: strong Finely laminated/laminated/finely bedded 25 deg. >>									
		<<Struc: 239.3 - 239.45: strong Fault 10 deg. >>									
		<<Struc: 243 - 252.98: strong Finely laminated/laminated/finely bedded 25 deg. >> Some local variability to 30 TCA;									

**End of Hole @ 252.98**



## GeoSpark: Drill Hole Report

**Project:** Bull River

**Hole:** RX-19-05

<b>Prospect:</b>	REX	<b>Survey Type:</b>	GPS	<b>Logged By:</b>	Bernie Augsten	<b>Hole Type:</b>	DD
<b>UTM Grid:</b>	NAD83_Z11	<b>Survey By:</b>	J Christmann	<b>Date Started:</b>	2019-09-01	<b>Hole Diameter:</b>	7.57
<b>UTM East:</b>	627989.55	<b>Azimuth:</b>	114	<b>Date Completed:</b>	2019-09-03	<b>Core Size:</b>	NQ2
<b>UTM North:</b>	5474282.01	<b>Dip:</b>	-35	<b>Drill Company:</b>	Lucky	<b>Casing Pulled?:</b>	<input checked="" type="checkbox"/>
<b>UTM Elevation (m):</b>	947	<b>Length (m):</b>	260.3	<b>Drill Rig:</b>	Rig1	<b>Casing Depth (m):</b>	
<b>Local Grid:</b>				<b>Drill Started:</b>	2019-09-01	<b>Reduced (m):</b>	
<b>Local East:</b>				<b>Drill Completed:</b>	2019-09-03	<b>Reduced Size:</b>	
<b>Local North:</b>						<b>Oriented?:</b>	<input type="checkbox"/>
<b>Local Elevation (m):</b>		<b>Comments:</b>					
<b>Hole Status:</b>	Completed	Comments					
<b>Hole Purpose:</b>	EXPL	"Hole was collared to test the known 'REX' zone further to the north than previous holes; Generally the hole was poorly mineralized but did intersect two zones of variable siderite-quartz-pyrrhotite veining as noted.					

108 - 123.2 - broad zone of generally weak SIQS veining; veins don't have a strong sheeted appearance as seen elsewhere; orientations are more irregular, locally weakly pygmatic, strongest subinterval of veining between 115.1 and 117.4;

162.75 - 165.2 - strong zone of veining comprised primarily of SIQS veining; some narrow (1-2mm) veinlets of mostly light grey quartz +/- po; zone altered in part to pale green chlorite/sericite;"

Depth (m)	Survey Method	Survey By	Date Surveyed	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Mag. Field	Accept Values?	Comments
16.46	EZShot	Jeff	2019-08-14	-34.6	80	14.1	94.1	55463	<input checked="" type="checkbox"/>	Down hole surveys collected with multi shot when hole was completed
46.94	EZShot	Jeff	2019-08-14	-34.7	81.7	14.1	95.8	55739	<input checked="" type="checkbox"/>	
77.42	EZShot	Jeff	2019-08-14	-34.7	83.4	14.1	97.5	54863	<input checked="" type="checkbox"/>	
107.89	EZShot	Jeff	2019-08-14	-35	81.8	14.1	95.9	55362	<input checked="" type="checkbox"/>	



## GeoSpark: Drill Hole Report

Hole: RX-19-05

Depth (m)	Survey Method	Survey By	Date Surveyed	Dip	Measured Azimuth	Correction Factor	Corrected Azimuth	Mag. Field	Accept Values?	Comments
138.37	EZShot	Jeff	2019-08-14	-35	83.5	14.1	97.6	55457	<input checked="" type="checkbox"/>	
168.85	EZShot	Jeff	2019-08-14	-35.2	84.3	14.1	98.4	55361	<input checked="" type="checkbox"/>	
199.33	EZShot	Jeff	2019-08-14	-35.3	85.2	14.1	99.3	55021	<input checked="" type="checkbox"/>	
229.81	EZShot	Jeff	2019-08-14	-35.6	86.2	14.1	100.3	55288	<input checked="" type="checkbox"/>	
260.29	EZShot	Jeff	2019-08-14	-35.5	85.2	14.1	99.3	57257	<input checked="" type="checkbox"/>	

Hole: RX-19-05

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	Au Best ppb	Ag Best ppm	Cu Best pct	Pb Best pct	Zn Best pct
0.00	4.27	OVB Overburden									
4.27	260.29	SLTS Siltstone light grey FG									
<p>Thinly laminated, intercalated, lighter grey siltstones with darker grey to black, more carbonaceous argillite; laminations are on the cm to mm-scale; see some graphite on slip surfaces notably in argillite rich sections; Oxidation as limonite on fractures/breaks to about 20m;</p> <p>41.6 - 42.85 - FAULT; preceding fault, sediments are strongly block faulted with contorted bedding;</p> <p>108 - 123.2 - broad zone of generally weak SIQS veining; veins don't have a strong sheeted appearance as seen elsewhere; orientations are more irregular, locally weakly pygmatic, strongest subinterval of veining between 115.1 and 117.4;</p> <p>162.75 - 165.2 - strong zone of veining comprised primarily of SIQS veining; some narrow (1-2mm) veinlets of mostly light grey quartz +/- po; zone altered in part to pale green chlorite/sericite;</p> <p>&lt;&lt;Min: 4.27 - 67.75: 2% pyrrhotite / 0.5% pyrrhotite / 0.5% pyrite&gt;&gt;</p> <p>&lt;&lt;Min: 67.75 - 68.2: 2% pyrrhotite / 0.3% pyrite&gt;&gt;</p> <p>&lt;&lt;Min: 68.2 - 72.65: 3% pyrrhotite / 0.5% pyrite / 0.1% chalcopyrite&gt;&gt;</p> <p>&lt;&lt;Min: 72.65 - 108: 2% pyrrhotite / 1% pyrrhotite / 0.5% pyrite&gt;&gt; Pyrrhotite occurs as irregular diss blebs, elongated blebs often concentrated in specific laminae; also see po as massive to semi-massive narrow seams, in bedding parallel layers; rare po in crosscutting veinlet with siderite+/-qtz; Locally see up to 5% diss po, eg. 106.3m;</p> <p>&lt;&lt;Min: 108 - 115.1: 2% pyrrhotite / 0.3% pyrite / 0.3% pyrite / 0.05% chalcopyrite&gt;&gt; Pyrrhotite forms irregular aggregates in SIQS veins and often forms semi-massive selvages along vein margins; Trace cpy with po in veins;</p> <p>&lt;&lt;Min: 115.1 - 117.4: 3% pyrrhotite / 0.1% pyrite / 0.3% pyrite / 0.1% chalcopyrite&gt;&gt;</p> <p>&lt;&lt;Min: 117.4 - 123.2: 3% pyrrhotite / 0.3% pyrite / 0.05% chalcopyrite&gt;&gt;</p> <p>&lt;&lt;Min: 123.2 - 129.5: 0.5% pyrrhotite / 2% pyrrhotite / 0.5% pyrite&gt;&gt;</p> <p>&lt;&lt;Min: 129.5 - 154: 0.5% pyrrhotite / 1.5% pyrrhotite / 0.5% pyrite&gt;&gt; Most po in narrow 1-2mm bedding parallel seams with/without some siderite and often as solid or semi-solid po;</p> <p>&lt;&lt;Min: 154 - 162.75: 1% pyrrhotite / 1% pyrrhotite / 0.3% pyrite / 0.3% pyrite / 0.05% chalcopyrite&gt;&gt;</p> <p>&lt;&lt;Min: 162.75 - 165.2: 4% pyrrhotite / 0.3% pyrite / 0.05% chalcopyrite&gt;&gt;</p> <p>&lt;&lt;Min: 165.2 - 173.4: 3% pyrrhotite / 0.5% pyrrhotite / 0.3% pyrite / 0.3% pyrite / 0.05% chalcopyrite&gt;&gt; Most pyrrhotite in either crosscutting or bedding parallel veins/seams;</p>											



# GeoSpark: Drill Hole Report

Hole: RX-19-05

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	Au Best ppb	Ag Best ppm	Cu Best pct	Pb Best pct	Zn Best pct
		<<Min: 173.4 - 260.3: 3% pyrrhotite / 0.5% pyrrhotite / 0.05% pyrite / 0.05% chalcopyrite>> Most pyrrhotite in narrow (1-5mm) bedding parallel seams as semi-massive to massive; disseminated pyrrhotite in sediments comes and goes, with local relatively high concentrations (1-3%) over short core lengths; as diss it occurs as small rounded grains and larger irregular blebs to 3mm often concentrated within lighter grey siltstone laminae;									
		<<Vein: 4.27 - 32.5: 0.5% Siderite-quartz>>									
		<<Vein: 32.5 - 33.85: 3% Siderite-quartz>>									
		<<Vein: 33.85 - 35.5: 0.3% Siderite-quartz>>									
		<<Vein: 35.5 - 38.5: 4% Siderite-quartz>>									
		<<Vein: 38.5 - 65.95: 1% Siderite-quartz>> Locally somewhat higher over small intervals;									
		<<Vein: 65.95 - 67.75: 3% Siderite-quartz>>									
		<<Vein: 67.75 - 68.2: 15% Siderite-quartz>> Intense stockwork of siderite-qtz veins and light grey mostly qtz veining; overall sulphides low;									
		<<Vein: 68.2 - 72.65: 4% Siderite quartz sulphide (pyrrhotite+/pyrite+/-chalcopyrite)>> Locally forms weak stockwork (71.3 - 72.65);									
		<<Vein: 108 - 115.1: 1.5% Siderite quartz sulphide (pyrrhotite+/pyrite+/-chalcopyrite)>> Interval of weak erratic veining; no real sense of sheeted veining; sulphides in veins dominated by pyrrhotite with subordinate py and trace cpy.									
		<<Vein: 115.1 - 117.4: 16% Siderite quartz sulphide (pyrrhotite+/pyrite+/-chalcopyrite)>>									
		<<Vein: 117.4 - 123.2: 5% Siderite quartz sulphide (pyrrhotite+/pyrite+/-chalcopyrite)>>									
		<<Vein: 123.2 - 129.5: 0.7% Siderite quartz sulphide (pyrrhotite+/pyrite+/-chalcopyrite)>>									
		<<Vein: 129.5 - 154: 0.5% Siderite-quartz>>									
		<<Vein: 154 - 162.75: 1% Siderite quartz sulphide (pyrrhotite+/pyrite+/-chalcopyrite) / 0.5% Siderite-quartz>>									
		<<Vein: 162.75 - 165.2: 10% Siderite quartz sulphide (pyrrhotite+/pyrite+/-chalcopyrite) / 10% Quartz-Pyrrhotite>> Interval characterized by several larger +4cm SIQS veins and a network of generally sheeted narrower lighter grey quartz+/-pyrrhotite veinlets, (locally forming stockwork); the latter may contains some siderite; also they appear somewhat later than the coarser grained siderite-rich veins;									
		<<Vein: 165.2 - 181: 1% Siderite quartz sulphide (pyrrhotite+/pyrite+/-chalcopyrite) / 0.5% Siderite quartz sulphide (pyrrhotite+/pyrite+/-chalcopyrite)>> Crosscutting veining diminishes with depth;									
		<<Vein: 181 - 216: 0.5% Siderite quartz sulphide (pyrrhotite+/pyrite+/-chalcopyrite) / 2% Siderite quartz sulphide (pyrrhotite+/pyrite+/-chalcopyrite) / 0.5% Siderite-quartz>> Interval contains few coarse grained SIQS veins but numerous bedding parallel, seams or 'veins' of siderite+/-qtz+pyrrhotite usually 2-5mm and these as seen elsewhere on the REX have more of a replacement style with irregular or more diffuse margins; pyrrhotite in these seams is often either as dense aggregates or semi-massive to massive;									



## GeoSpark: Drill Hole Report

Hole: RX-19-05

From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	Au Best ppb	Ag Best ppm	Cu Best pct	Pb Best pct	Zn Best pct
		<<Vein: 216 - 260.3: 2% Siderite quartz sulphide (pyrrhotite+/pyrite+/-chalcopyrite) / 0.1% Siderite quartz sulphide (pyrrhotite+/pyrite+/-chalcopyrite) / 0.5% Siderite-quartz>> Bedding parallel SIQS veins/seams common and often mostly semi-massive to massive pyrrhotite+/- py (possibly should be categorized separately);									
		<<Struc: 4.27 - 24.4: strong Finely laminated/laminated/finely bedded 43 deg. >>									
		<<Struc: 24.4 - 30.7: strong Finely laminated/laminated/finely bedded 37 deg. >>									
		<<Struc: 30.7 - 32.5: strong Finely laminated/laminated/finely bedded 45 deg. >>									
		<<Struc: 32.5 - 33.85: strong Fractured>> Rock mass strongly crackle fractured with fine siderite+/-qtz veining/fx-fill; rock strongly chloritized;									
		<<Struc: 33.85 - 33.86: moderate to strong Sheared 40 deg. / strong Finely laminated/laminated/finely bedded 30 deg. >> Shear cuts bedding obliquely;									
		<<Struc: 35.5 - 38.5: strong Fractured>> Rock mass strongly fractured with a network of hairline (mostly) siderite/-qtz veinlets; bedding laminations contorted and variable, (0 - 40 TCA), with strong block faulting locally; no associated sulphides;									
		<<Struc: 39 - 40.4: strong Finely laminated/laminated/finely bedded 45 deg. >>									
		<<Struc: 41.6 - 42.85: intense Fault 20 deg. >> Clay fault; some chlorite on slip surfaces; no associated sulphides;									
		<<Struc: 42.85 - 70: strong Finely laminated/laminated/finely bedded>> Bedding laminations extremely variable in this interval ranging from 0 - 45 and rapidly changing;									
		<<Struc: 77 - 82.7: strong Finely laminated/laminated/finely bedded 40 deg. >>									
		<<Struc: 83 - 97: strong Finely laminated/laminated/finely bedded 20 deg. >> Locally variable from 18 - 30 TCA and some convoluted bedding;									
		<<Struc: 102.05 - 102.1: moderate to strong Sheared 55 deg. >> strongly chloritized shear;									
		<<Struc: 106.5 - 111.5: strong Finely laminated/laminated/finely bedded 30 deg. >> Variable from 22 to 40 TCA;									
		<<Struc: 111.5 - 129.5: strong Finely laminated/laminated/finely bedded>> Extremely variable and rapidly changing lamination orientations;									
		<<Struc: 129.5 - 134: strong Finely laminated/laminated/finely bedded 45 deg. >> Some variability from 40 - 50 TCA;									
		<<Struc: 134 - 141.2: strong Finely laminated/laminated/finely bedded 40 deg. >>									
		<<Struc: 141.2 - 162.75: strong Finely laminated/laminated/finely bedded 35 deg. >> Some strong variations over short (<0.5m) core lengths.									
		<<Struc: 162.75 - 165.2: strong Veining - fracture fill 35 deg. >> Network of roughly sheeted light grey quartz+/- siderite+pyrrhotite veinlets;									



## GeoSpark: Drill Hole Report

Hole: RX-19-05

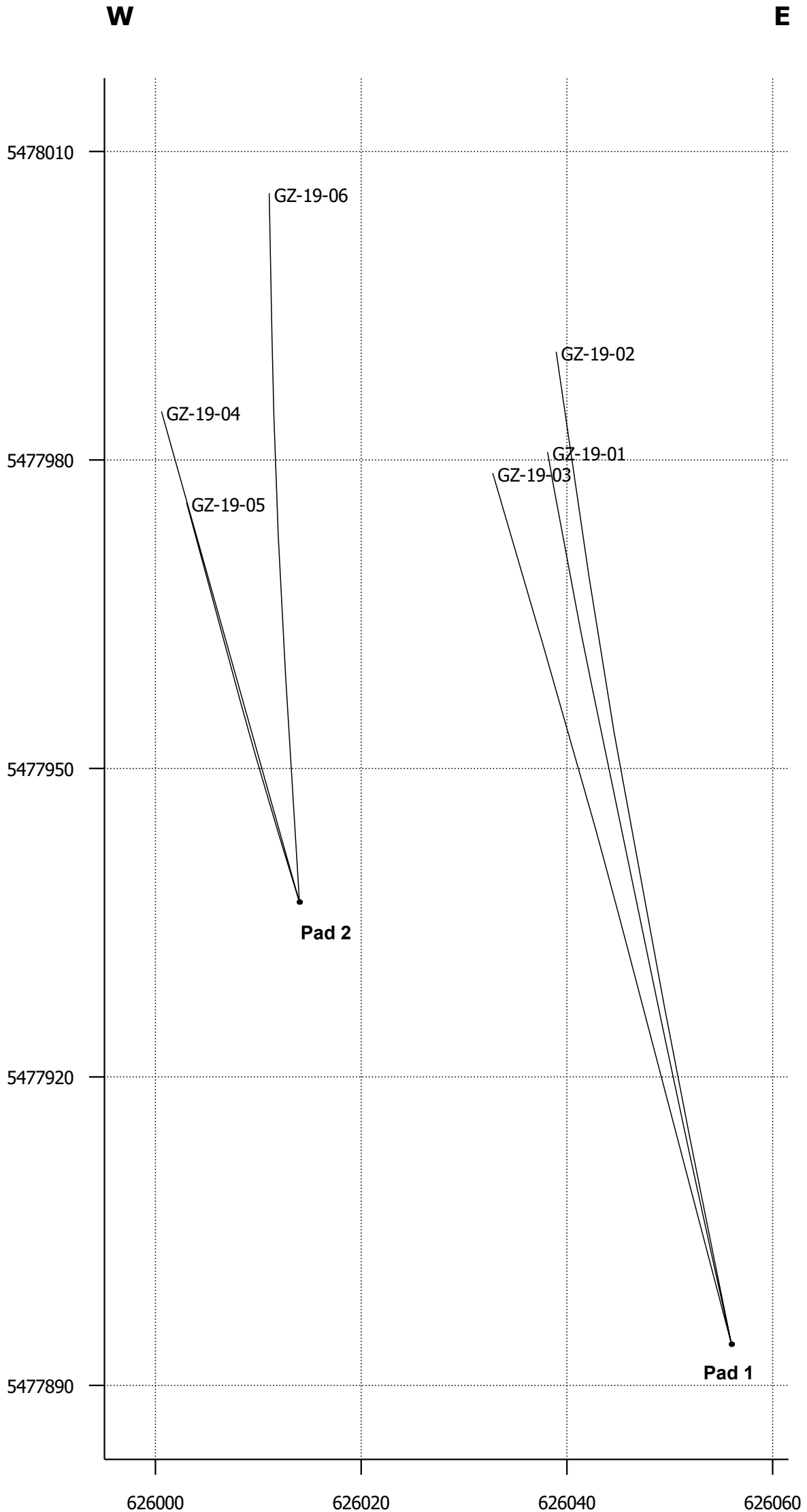
From (m)	To (m)	Rock Type & Description	From (m)	To (m)	Length	Sample #	Au Best ppb	Ag Best ppm	Cu Best pct	Pb Best pct	Zn Best pct
<<Struc: 181 - 240.7: strong Finely laminated/laminated/finely bedded 35 deg. >> See local variations as low as 20 to 40 TCA but overall consistently around 35; nicely bedded sediments sometimes disrupted by narrow crackle zones with strong hairline stockwork of siderite-qtz veinlets;											
<<Struc: 240.7 - 260.3: strong Finely laminated/laminated/finely bedded 25 deg. >>											
	67.75	68.20	0.45	0035262	3	1	0.004	0.01	0.005		
	68.20	70.00	1.80	0035264	3	1	0.002	0.01	0.005		
	70.00	71.30	1.30	0035265	3	1	0.002	0.01	0.005		
	71.30	72.65	1.35	0035266	2	1	0.002	0.01	0.005		
	115.10	116.00	0.90	0035267	8	1	0.016	0.01	0.005		
	116.00	117.40	1.40	0035268	8	1	0.011	0.01	0.005		
	162.75	164.00	1.25	0035269	15	1	0.012	0.01	0.005		
	164.00	165.20	1.20	0035270	6	1	0.017	0.01	0.005		

End of Hole @ 260.3



## **Appendix VI – Drillhole Plan and Cross-Sections**

# G Zone Plan View



## Location

W: 625995, 5478017

E: 626062, 5478017

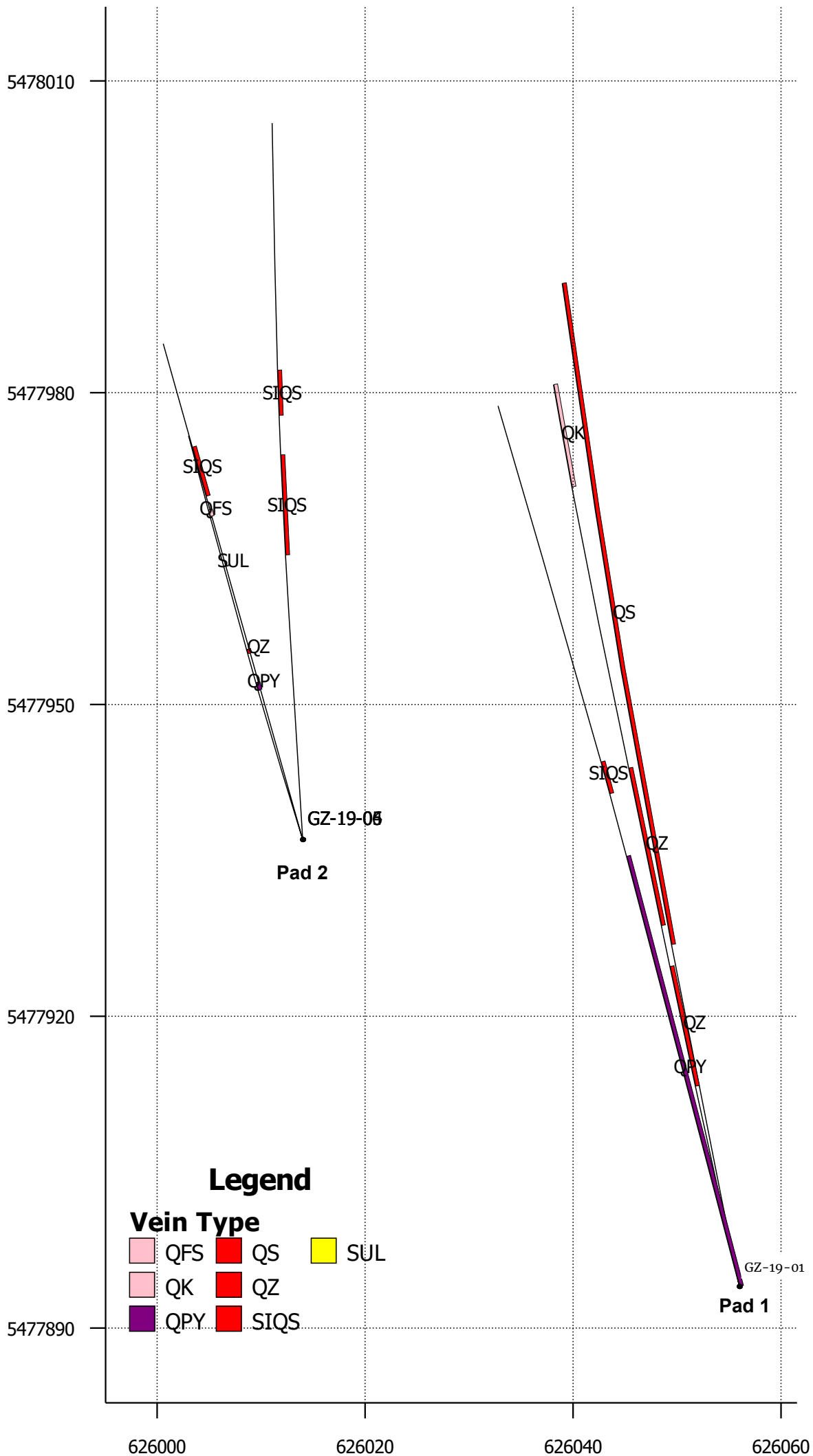
Scale: 1:500



# G Zone Plan View

W

E



## Legend

### Vein Type

- |   |  |   |  |  |  |   |
|---|--|---|--|--|--|---|
| <span style="display: inline-block; width: 15px; height: 15px; background-color: #f8d7da; border: 1px solid #c3e6cb;"></span> QFS | <span style="display: inline-block; width: 15px; height: 15px; background-color: #f8d7da; border: 1px solid #c3e6cb;"></span> QK | <span style="display: inline-block; width: 15px; height: 15px; background-color: #f8d7da; border: 1px solid #c3e6cb;"></span> QPY | <span style="display: inline-block; width: 15px; height: 15px; background-color: #f8d7da; border: 1px solid #c3e6cb;"></span> QZ | <span style="display: inline-block; width: 15px; height: 15px; background-color: #f8d7da; border: 1px solid #c3e6cb;"></span> QS | <span style="display: inline-block; width: 15px; height: 15px; background-color: #f8d7da; border: 1px solid #c3e6cb;"></span> SIQS | <span style="display: inline-block; width: 15px; height: 15px; background-color: #fff3cd; border: 1px solid #ffeeba;"></span> SUL |
|---|--|---|--|--|--|---|

## Location

W: 625995, 5478017

E: 626062, 5478017

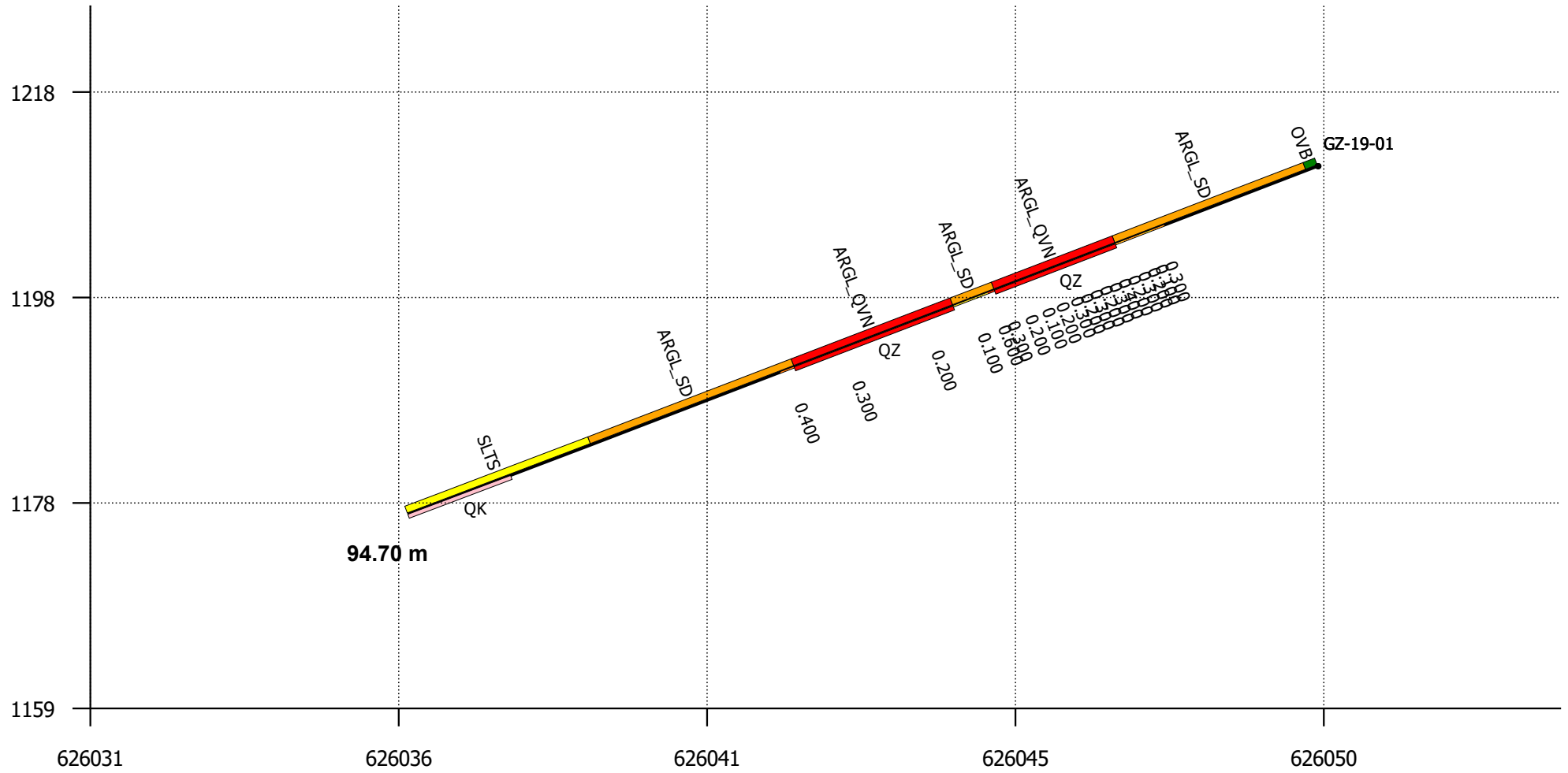
Scale: 1:500



NNW

# GZ-19-01

SSE



## Legend

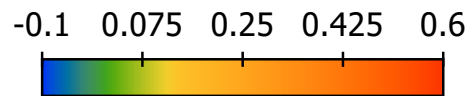
### Vein Type

- QFS
- QS
- SUL
- QK
- QZ
- QPY
- SIQS

### Lithology

- ARGL
- OVB
- ARGL\_QVN
- SLTS
- ARGL\_SD

### Ag ppm



Scale: 1:580

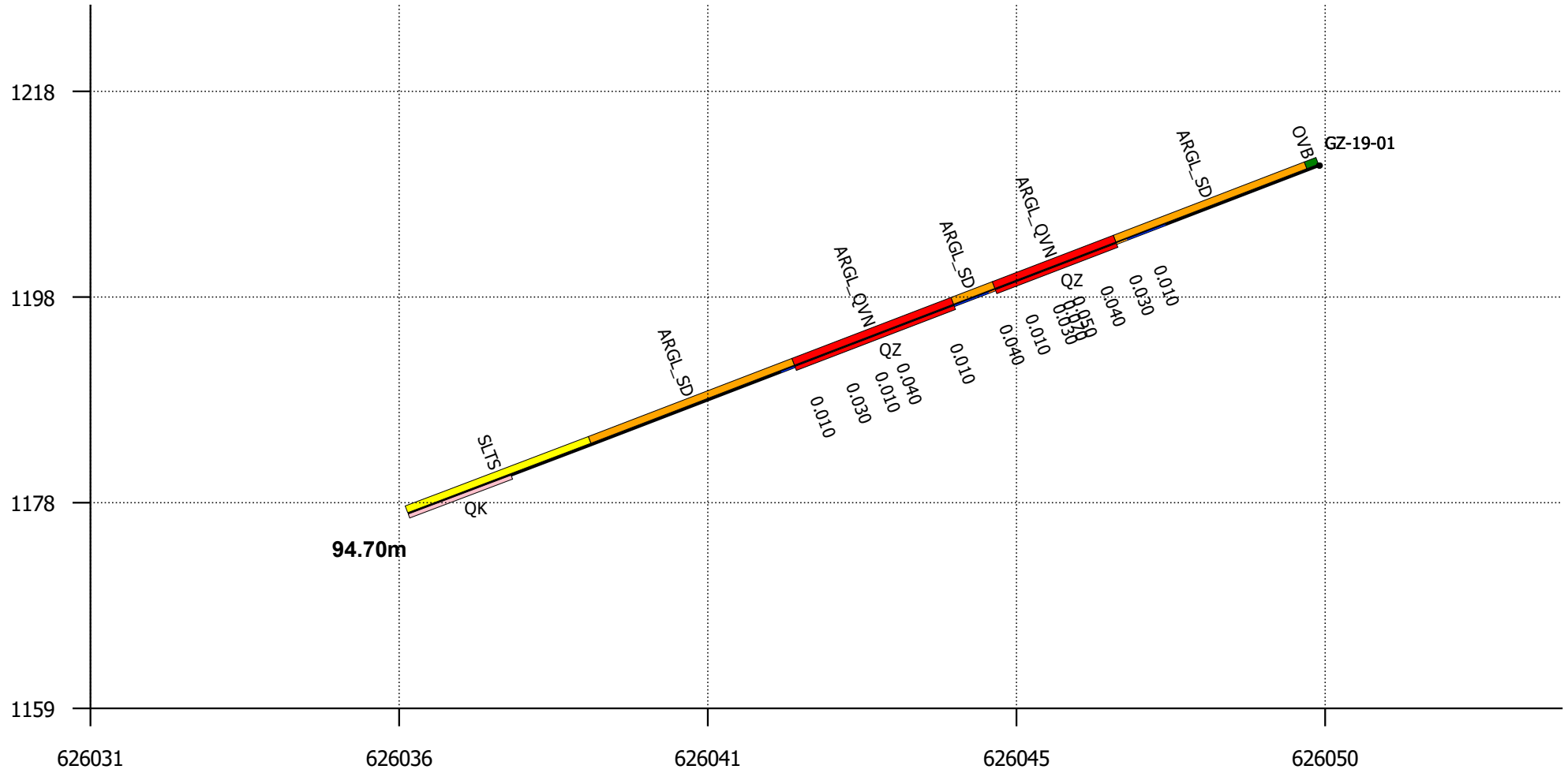
Vertical exaggeration: 1x



NNW

# GZ-19-01

SSE



## Legend

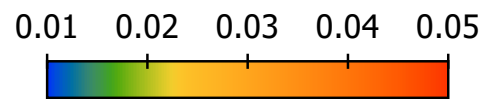
### Vein Type

- QFS
- QS
- SUL
- QK
- QZ
- QPY
- SIQS

### Lithology

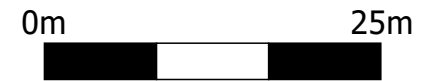
- ARGL
- OVB
- ARGL\_QVN
- SLTS
- ARGL\_SD

### Pb %



Scale: 1:580

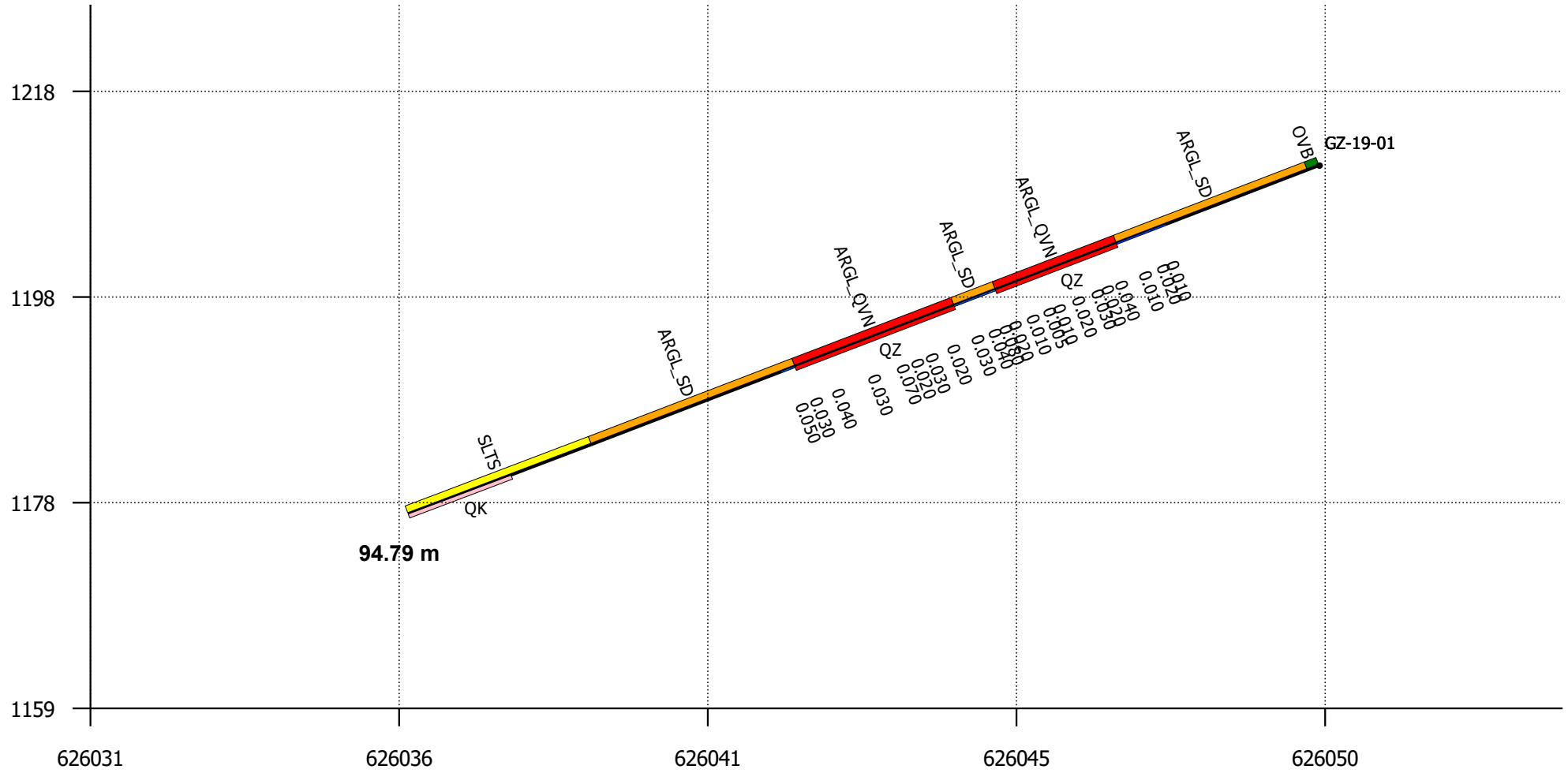
Vertical exaggeration: 1x



NNW

# GZ-19-01

SSE



## Legend

### Vein Type

- QFS
- QS
- SUL
- QK
- QZ
- QPY
- SIQS

### Lithology

- ARGL
- OVB
- ARGL\_QVN
- SLTS
- ARGL\_SD

### Zinc %

0.005 0.439 0.873 1.306 1.74



Scale: 1:580

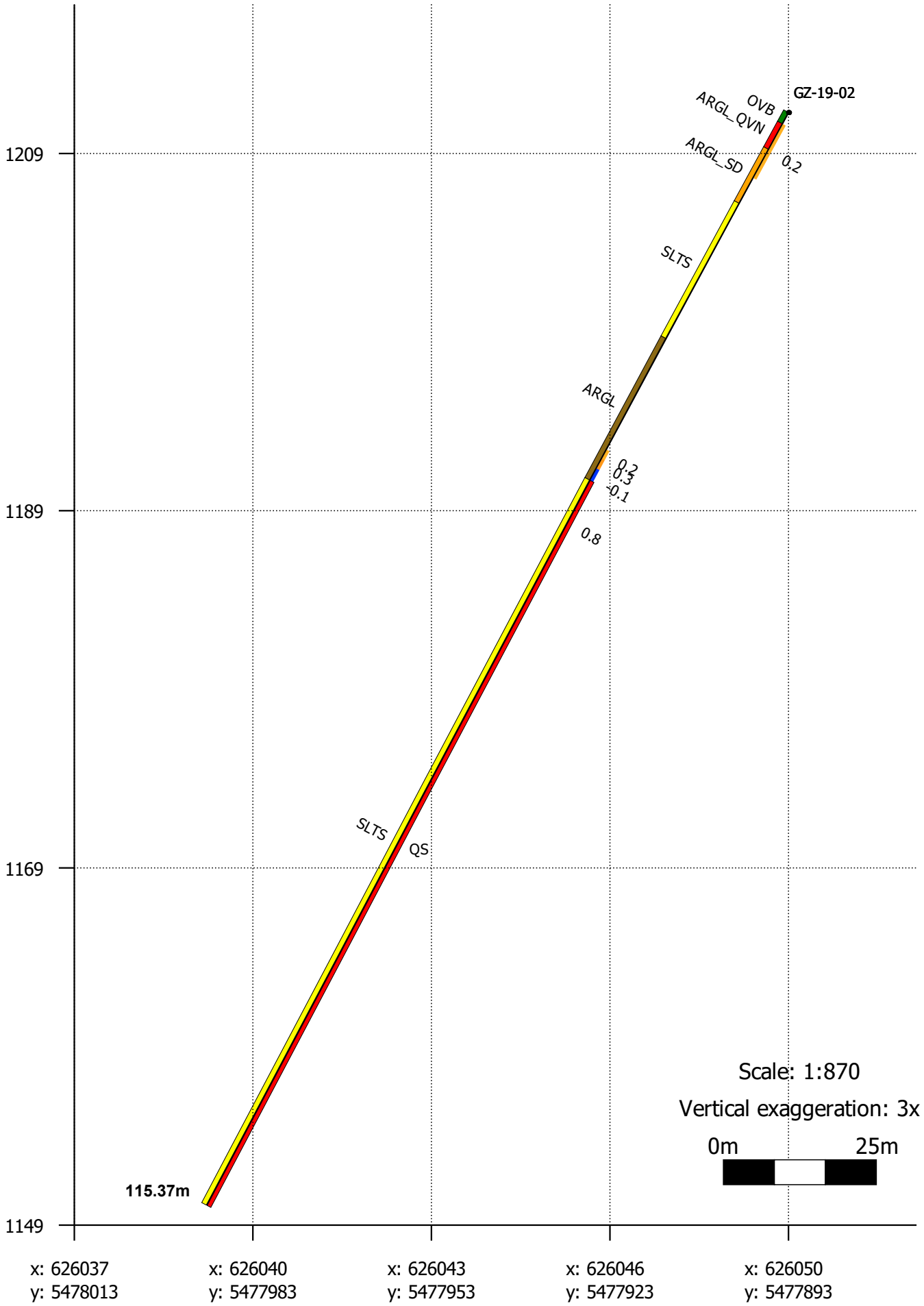
Vertical exaggeration: 1x



NNW

SSE

# GZ-19-02



## Legend

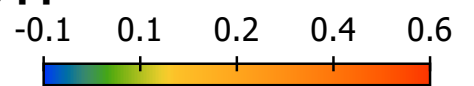
### Vein Type

- QFS
- QK
- QPY
- QS
- QZ
- SIQS
- SUL

### Lithology

- ARGL
- ARGL\_QVN
- ARGL\_SD
- OVB
- SLTS

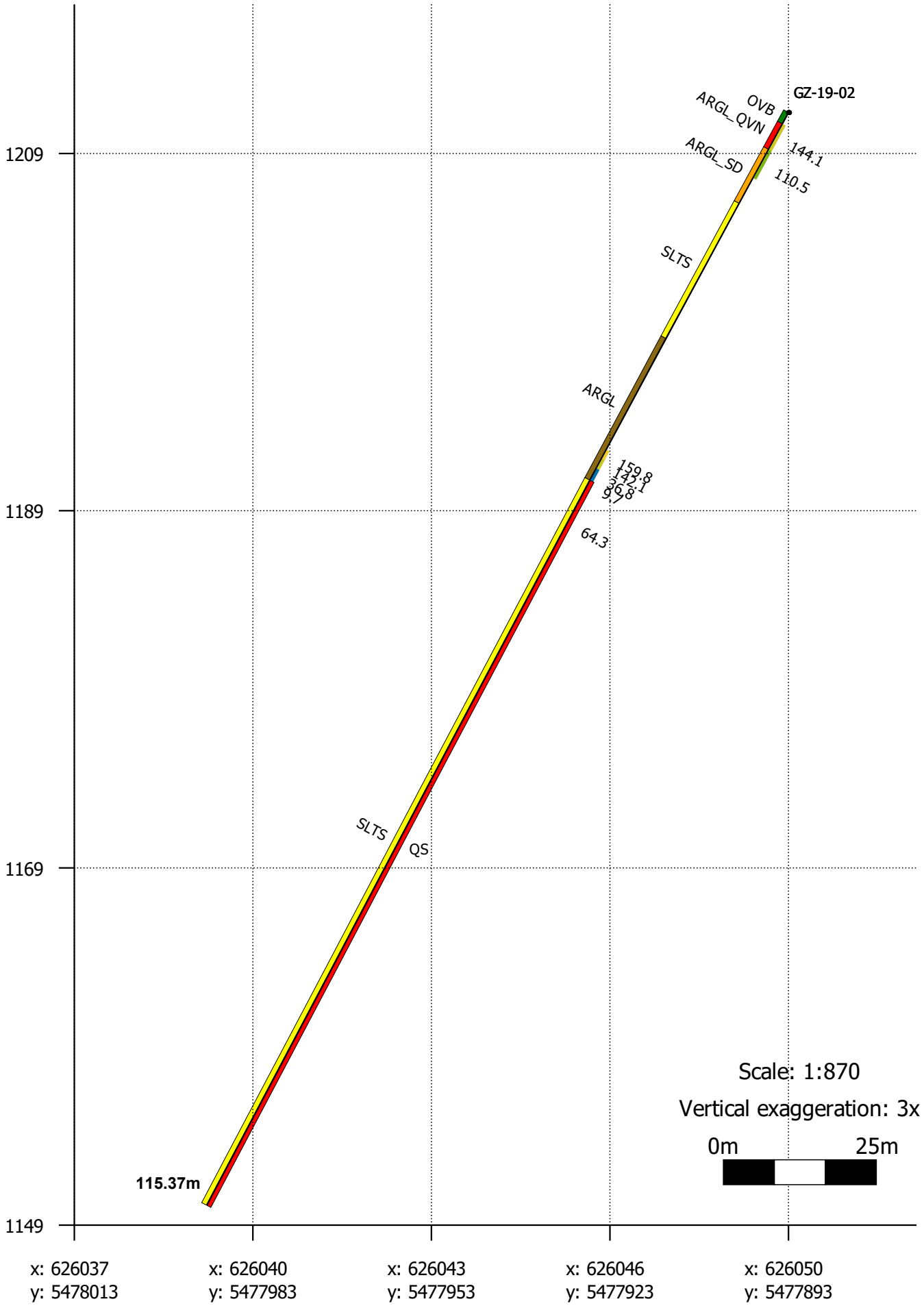
### Ag ppm



NNW

SSE

# GZ-19-02



## Legend

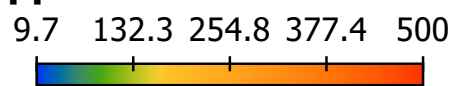
### Vein Type

- QFS
- QK
- QPY
- QS
- QZ
- SIQS
- SUL

### Lithology

- ARGL
- ARGL\_QVN
- ARGL\_SD
- OVB
- SLTS

### Pb ppm

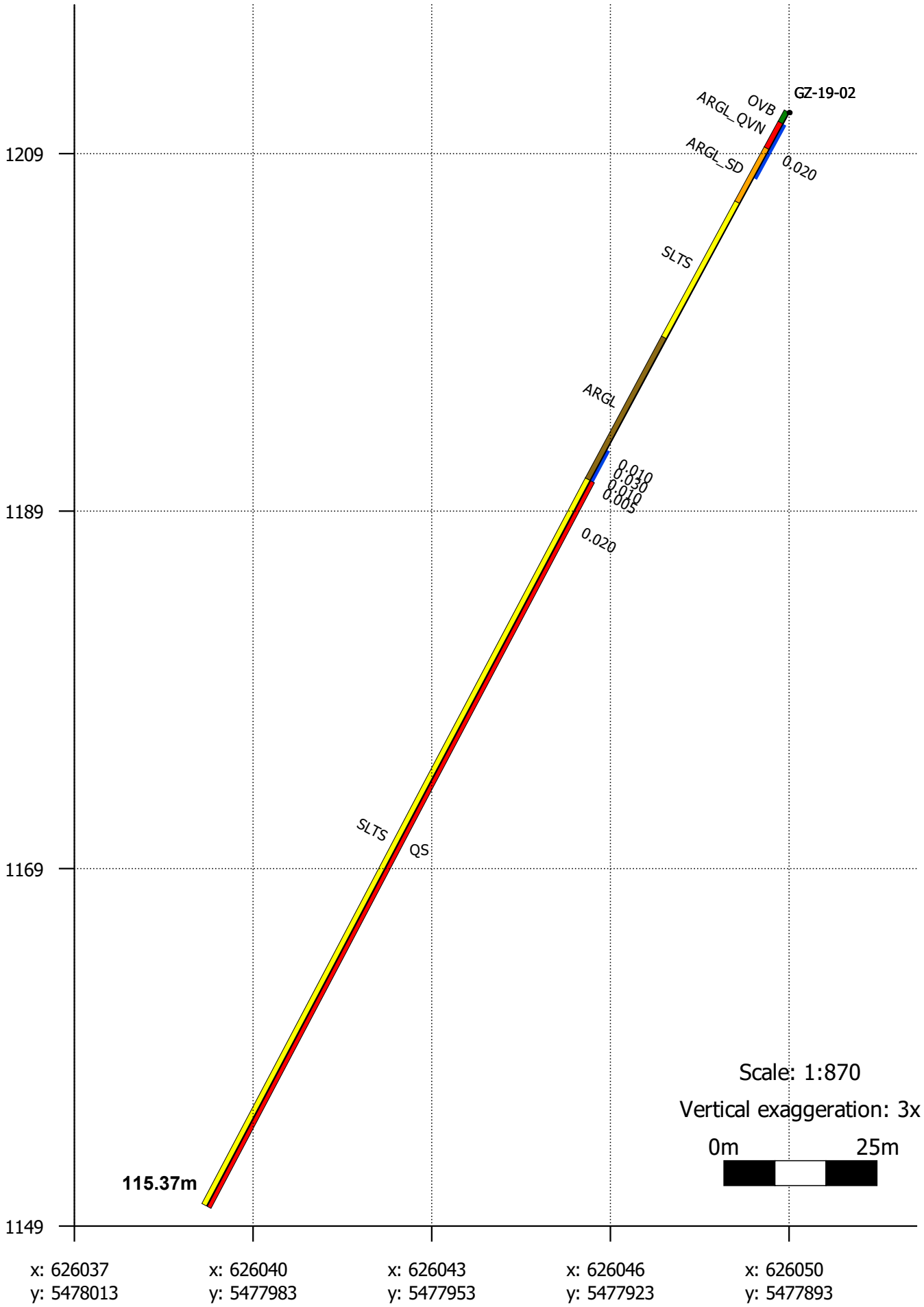




NNW

SSE

# GZ-19-02



## Legend

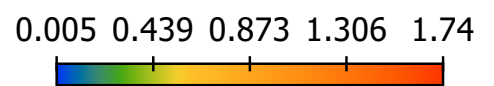
### Vein Type

- QFS
- QK
- QPY
- QS
- QZ
- SIQS
- SUL

### Lithology

- ARGL
- ARGL\_QVN
- ARGL\_SD
- OVB
- SLTS

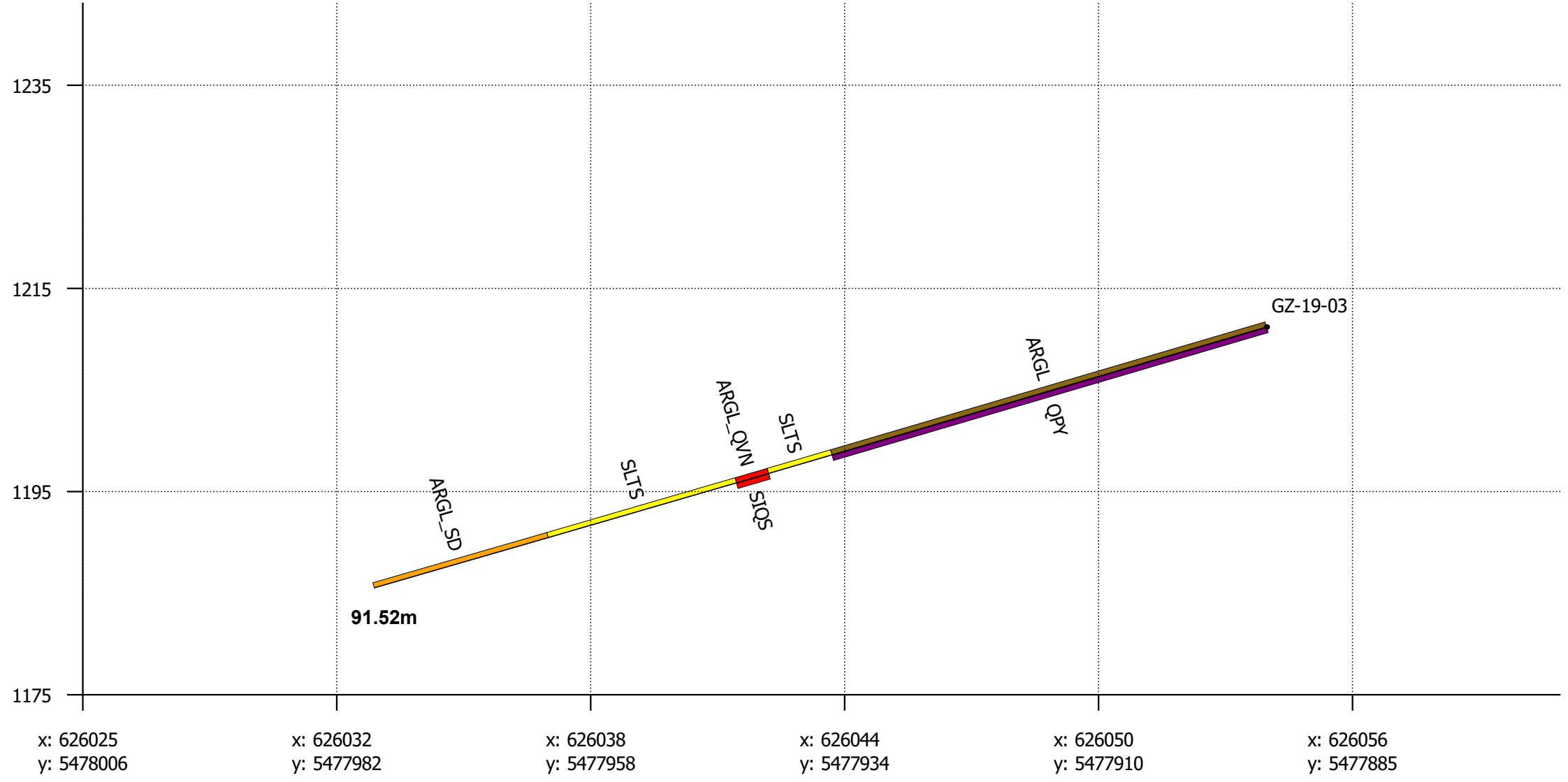
### Zinc %



NNW

# GZ-19-03

SSE



## Legend

### Lithology

- ARG\_L
- ARG\_L-QVN
- ARG\_L-SD
- OVB
- SLTS

### Vein Type

- QFS
- QS
- SUL
- QK
- QZ
- QPY
- SIQS

Scale: 1:520

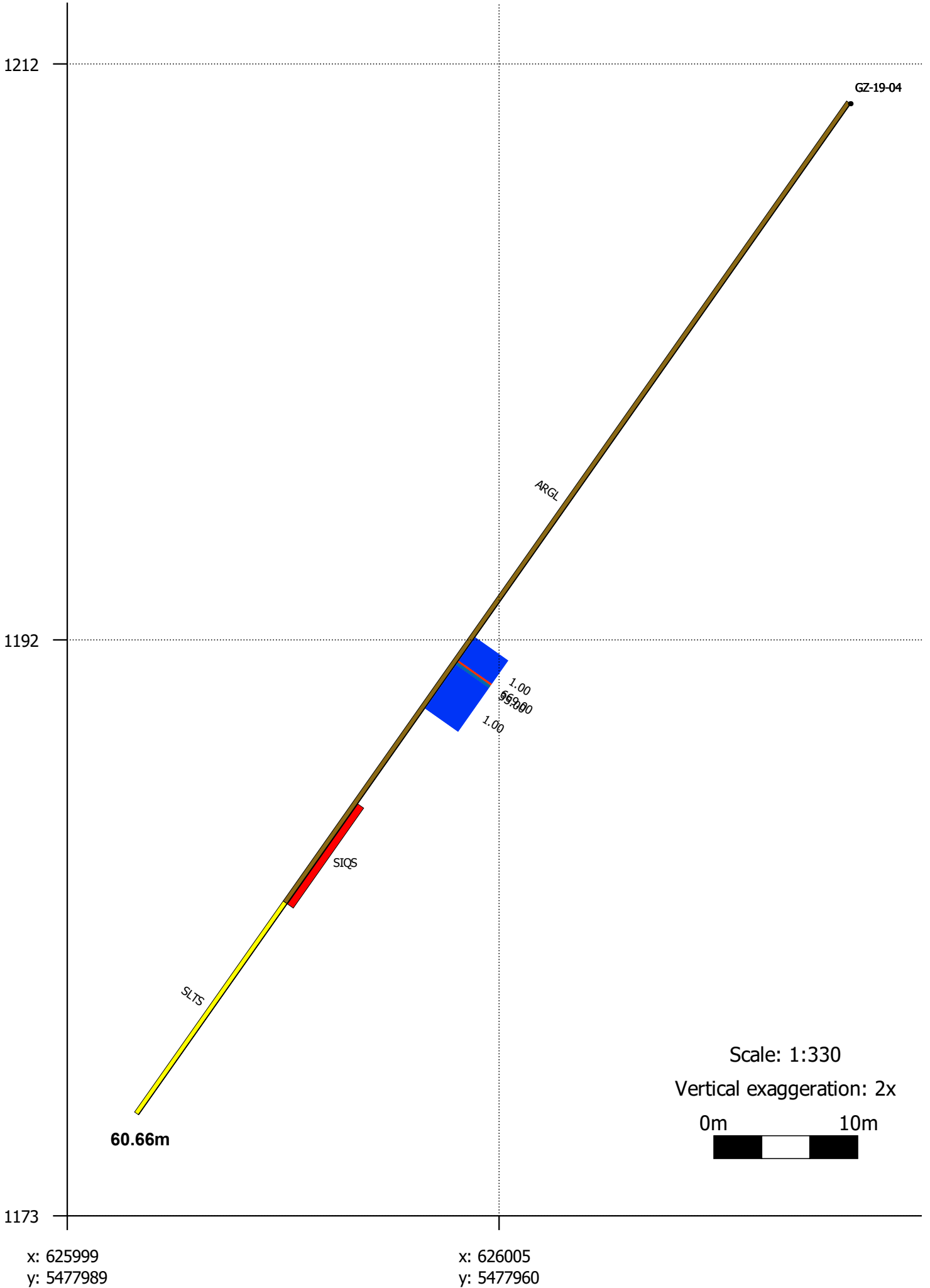
Vertical exaggeration: 1x



# GZ-19-04

NNW

SSE



## Legend

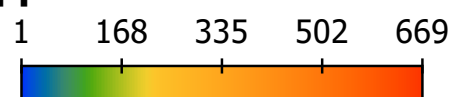
### Lithology

- ARGL
- OVB
- ARGL\_QVN
- SLTS
- ARGL\_SD

### Vein Type

- QFS
- QS
- SUL
- QK
- QZ
- QPY
- SIQS

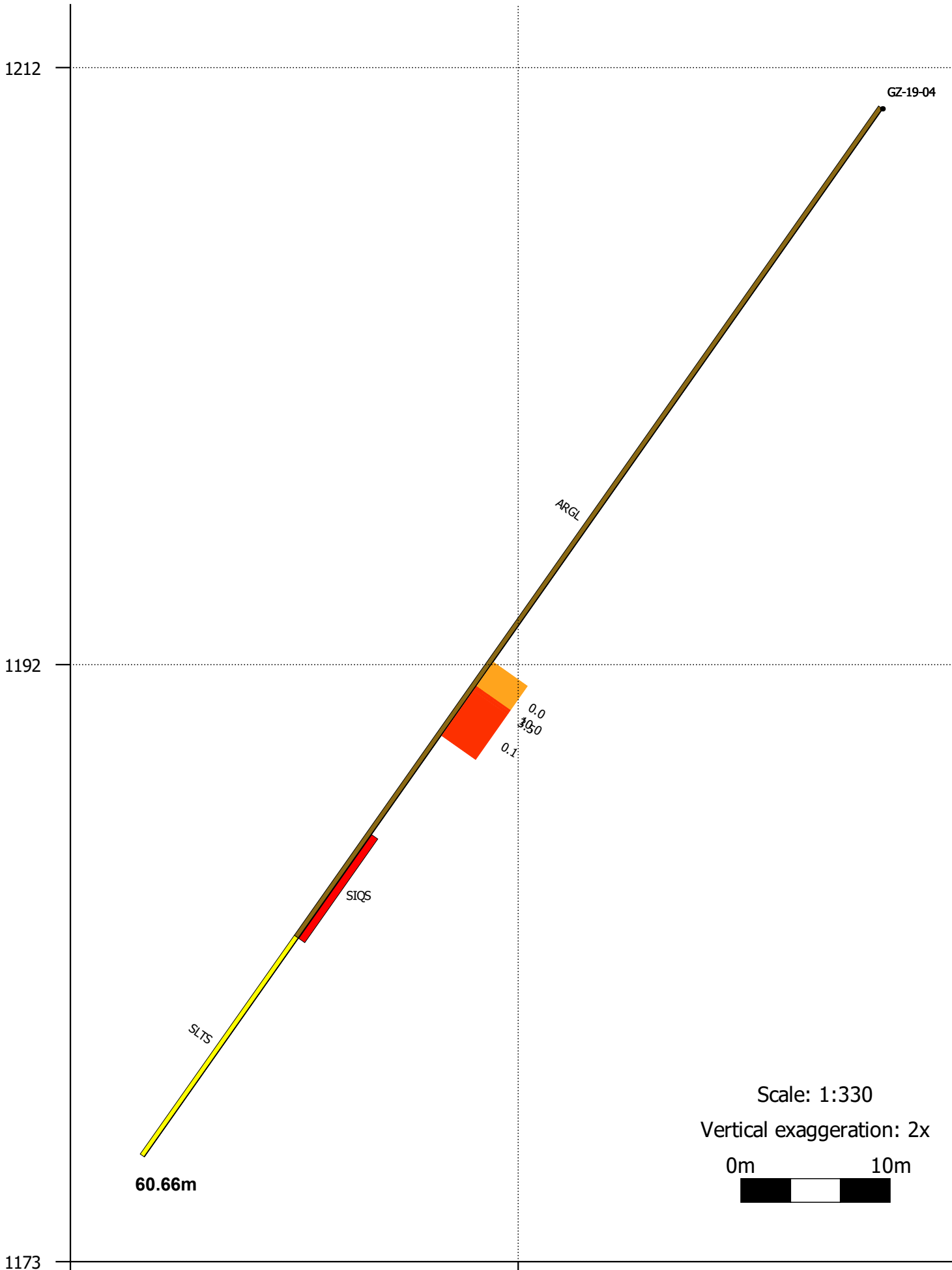
### Ag ppm



# GZ-19-04

NNW

SSE



## Legend

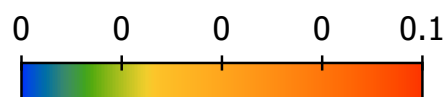
### Lithology

- ARGL
- ARGL\_QVN
- ARGL\_SD
- OVB
- SLTS

### Vein Type

- QFS
- QK
- QPY
- QS
- QZ
- SIQS
- SUL

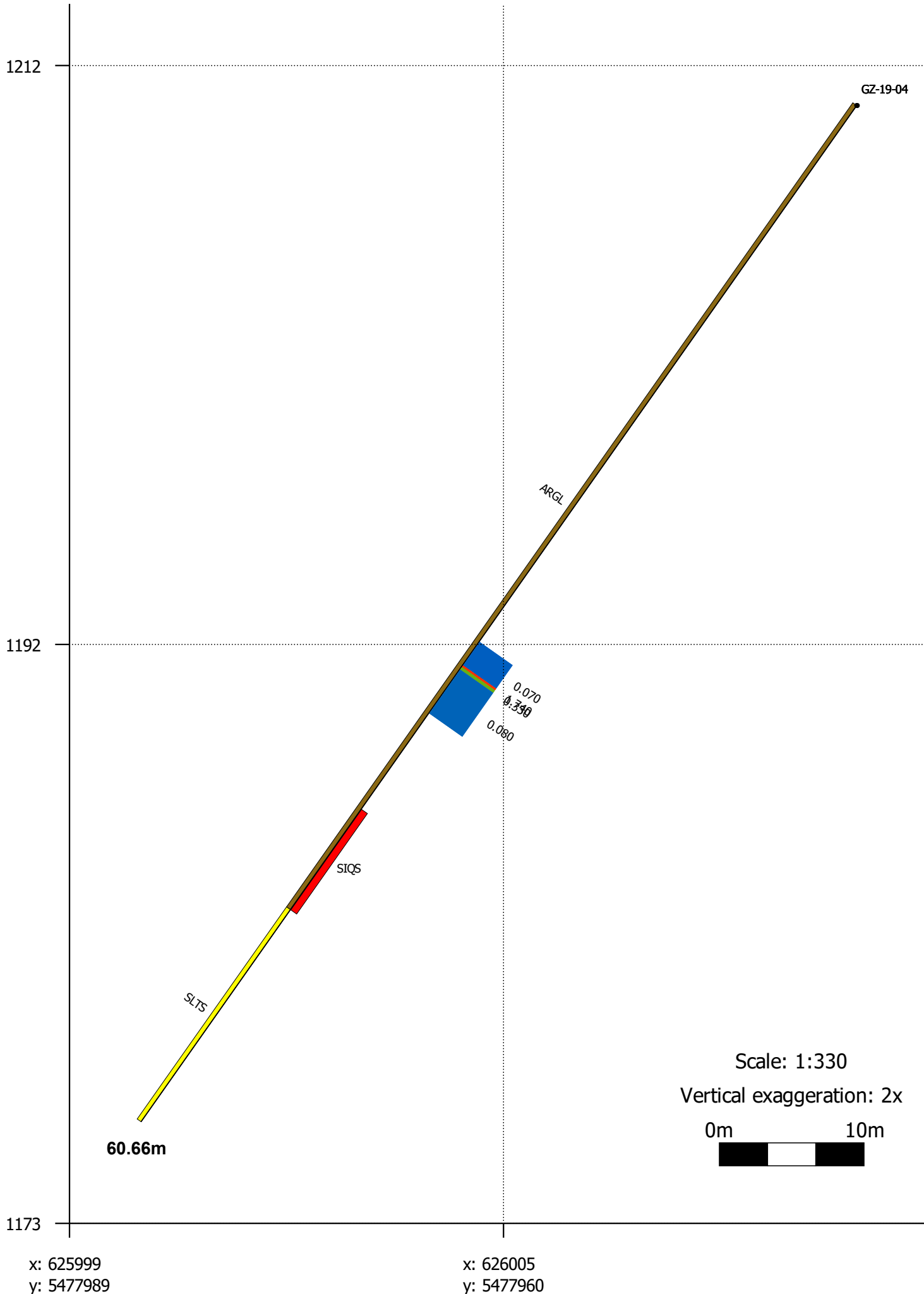
### Pb %



# GZ-19-04

NNW

SSE



## Legend

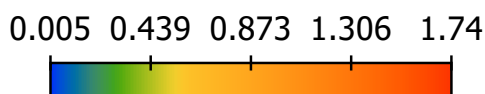
### Lithology

- ARGL
- ARGL\_QVN
- ARGL\_SD
- OVB
- SLTS

### Vein Type

- QFS
- QK
- QPY
- QS
- QZ
- SIQS
- SUL

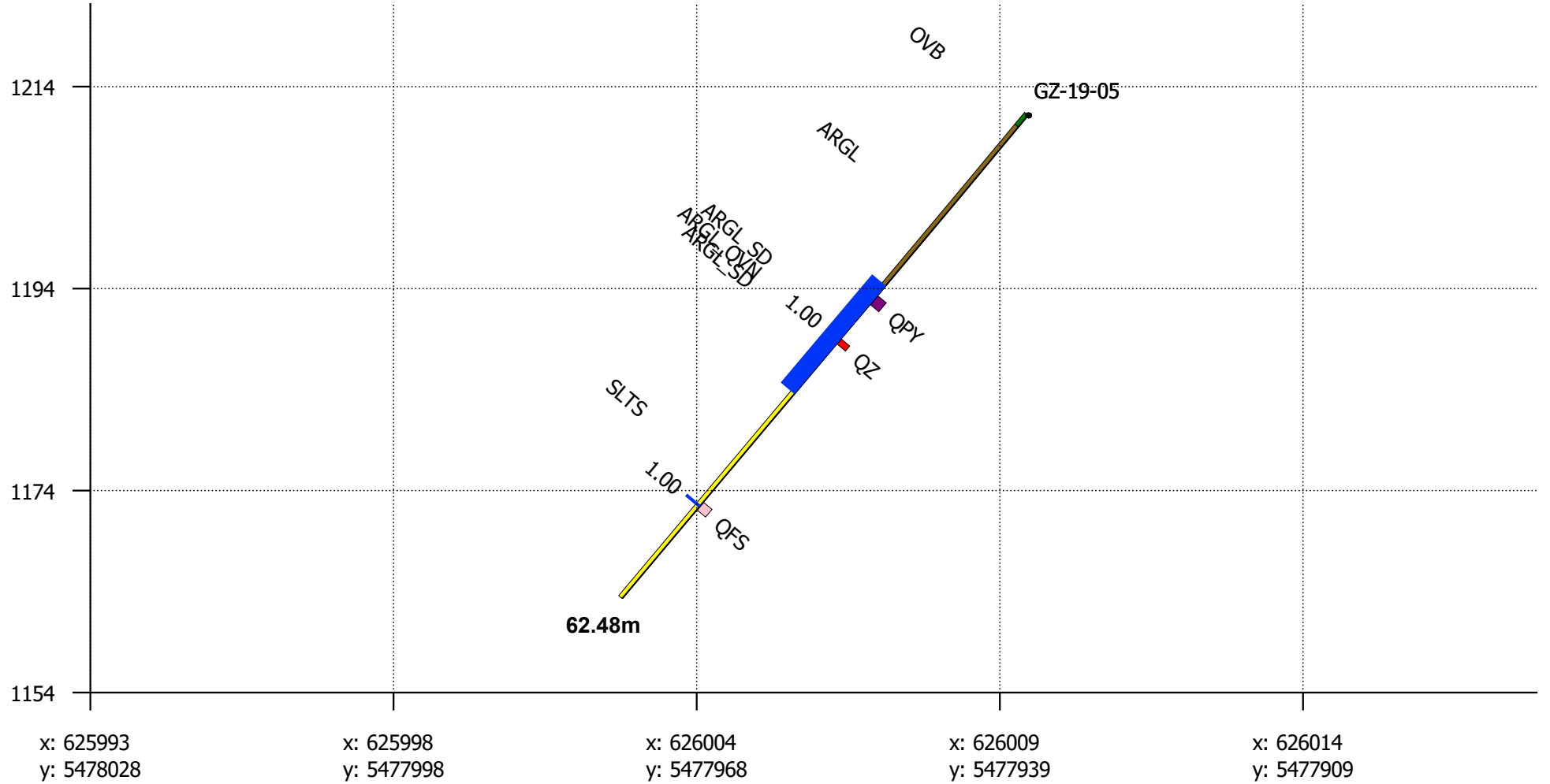
### Zn %



NNW

SSE

# GZ-19-05



## Legend

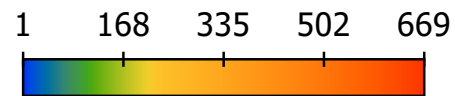
### Vein Type

- QFS
- QS
- SUL
- QK
- QZ
- QPY
- SIQS

### Lithology

- ARGL
- OVB
- ARGL\_QVN
- SLTS
- ARGL\_SD

### Ag ppm



Scale: 1:590

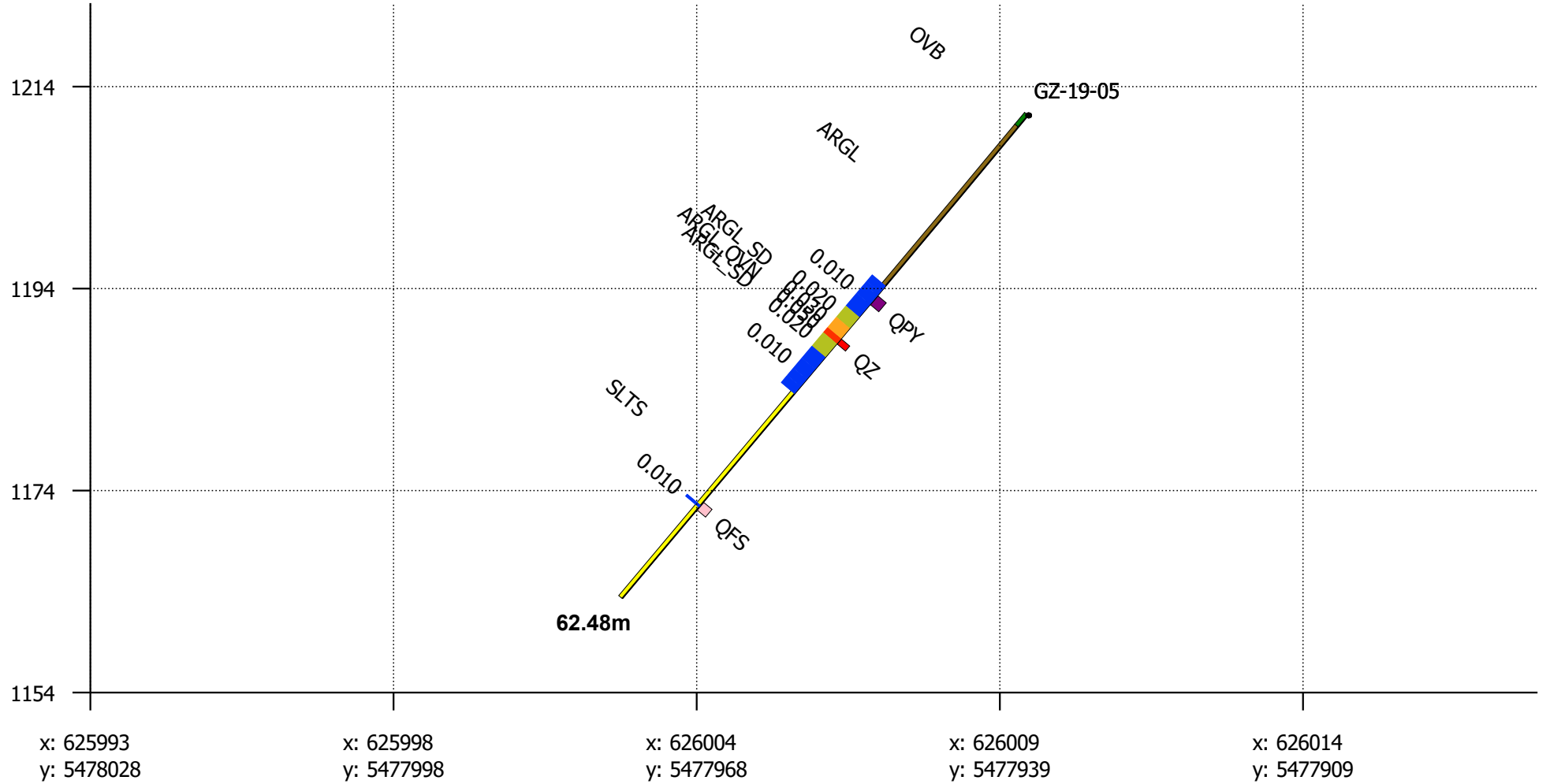
Vertical exaggeration: 1x



NNW

SSE

# GZ-19-05



## Legend

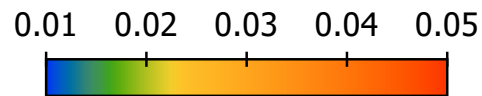
### Vein Type

- QFS
- QK
- QPY
- QS
- QZ
- SIQS
- SUL
- SLTS

### Lithology

- ARGL
- ARGL\_QVN
- ARGL\_SD
- OVB
- SLTS

### Pb %



Scale: 1:590

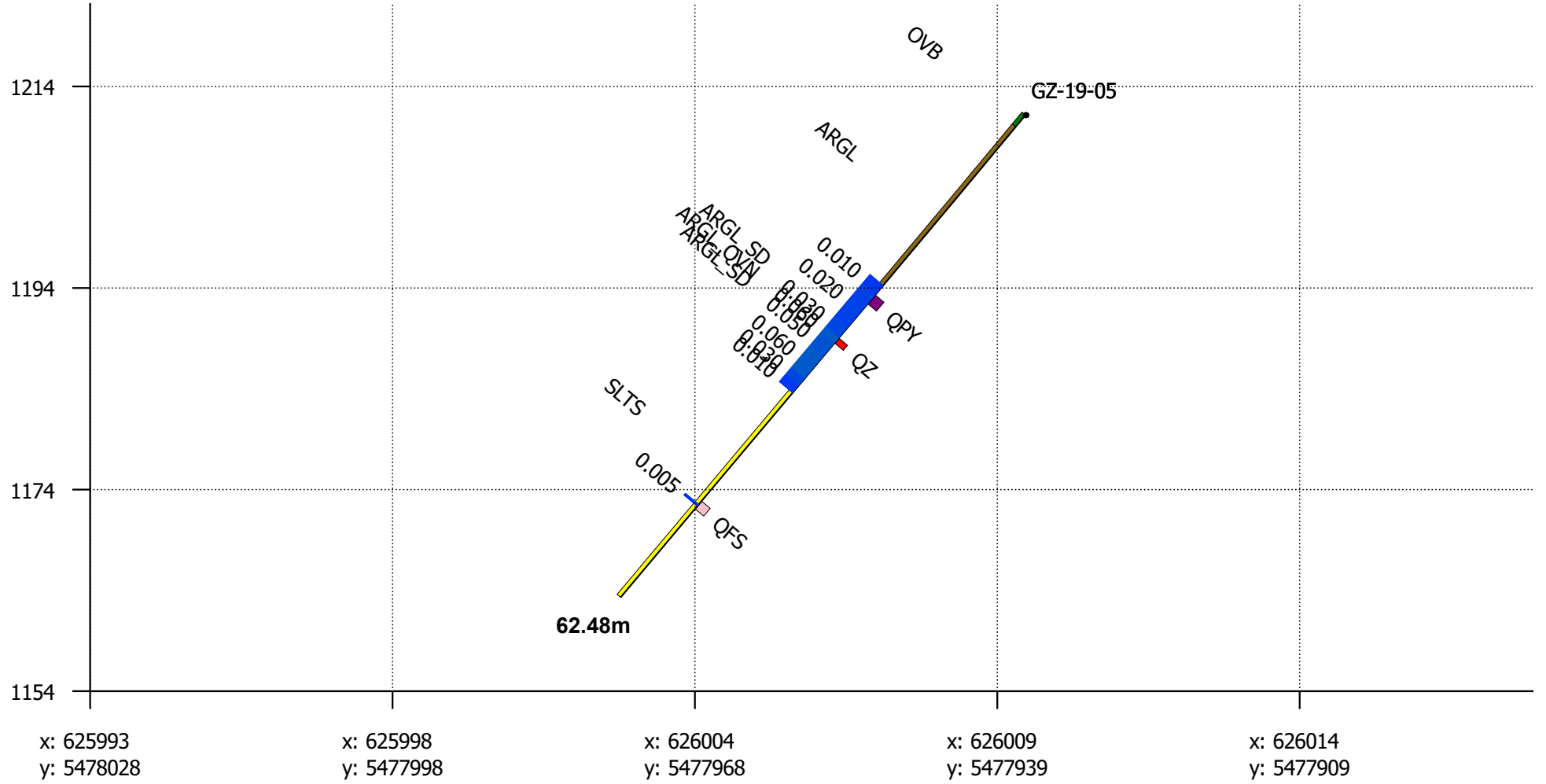
Vertical exaggeration: 1x



NNW

SSE

# GZ-19-05



## Legend

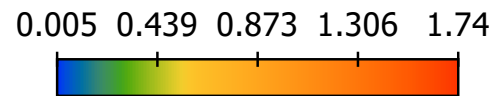
### Vein Type

- QFS
- QS
- SUL
- QK
- QZ
- QPY
- SIQS

### Lithology

- ARGL
- OVB
- ARGL\_QVN
- SLTS
- ARGL\_SD

### Zn %



Scale: 1:590

Vertical exaggeration: 1x

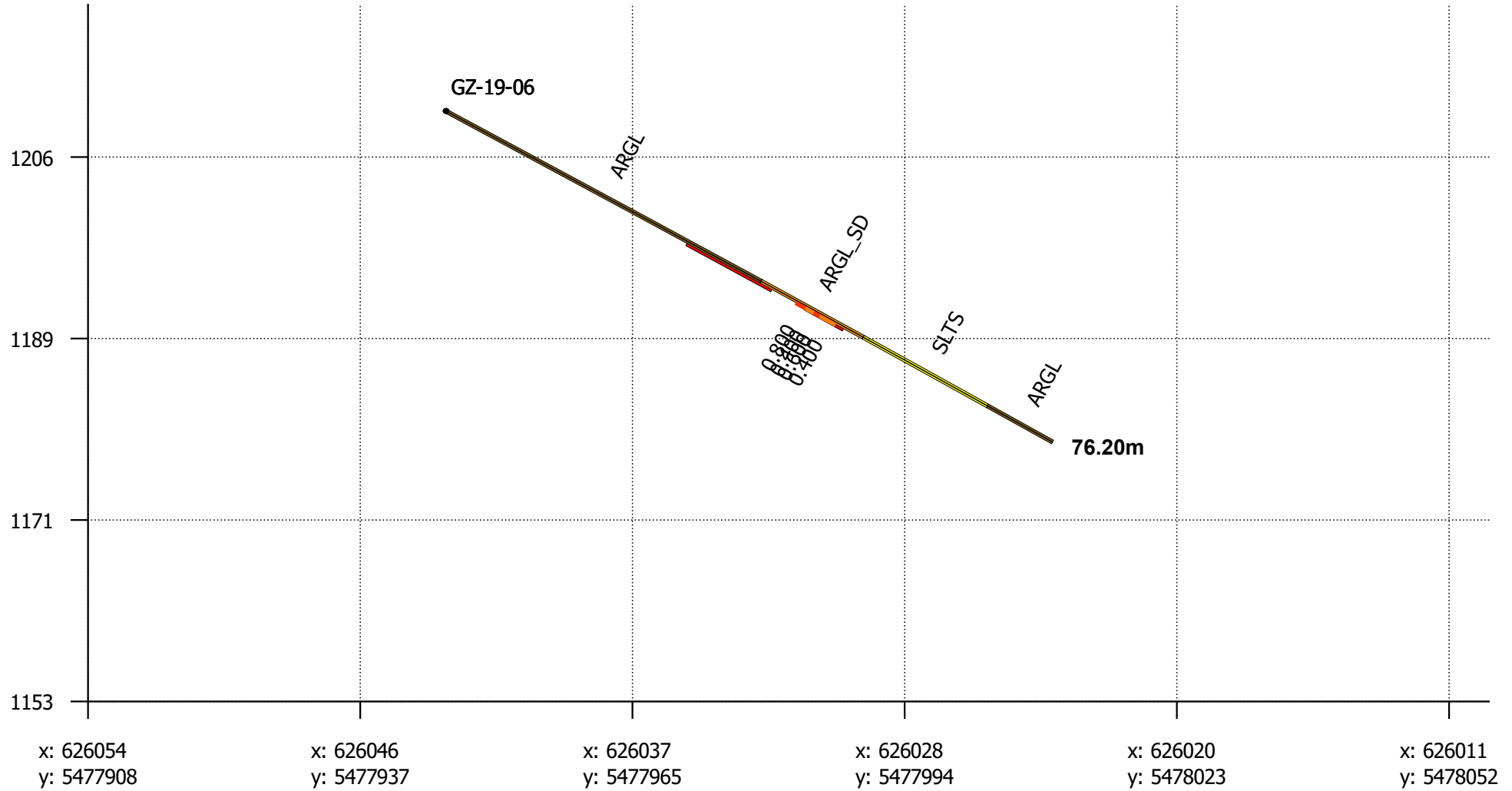




**A**

**B**

# GZ-19-06



## Legend

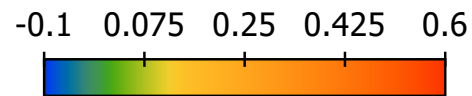
### Vein Type

- QFS
- QK
- QPY
- QS
- QZ
- SIQS
- SUL

### Lithology

- ARGL
- ARGL\_QVN
- ARGL\_SD
- OVB
- SLTS

### Ag ppm



Scale: 1:640

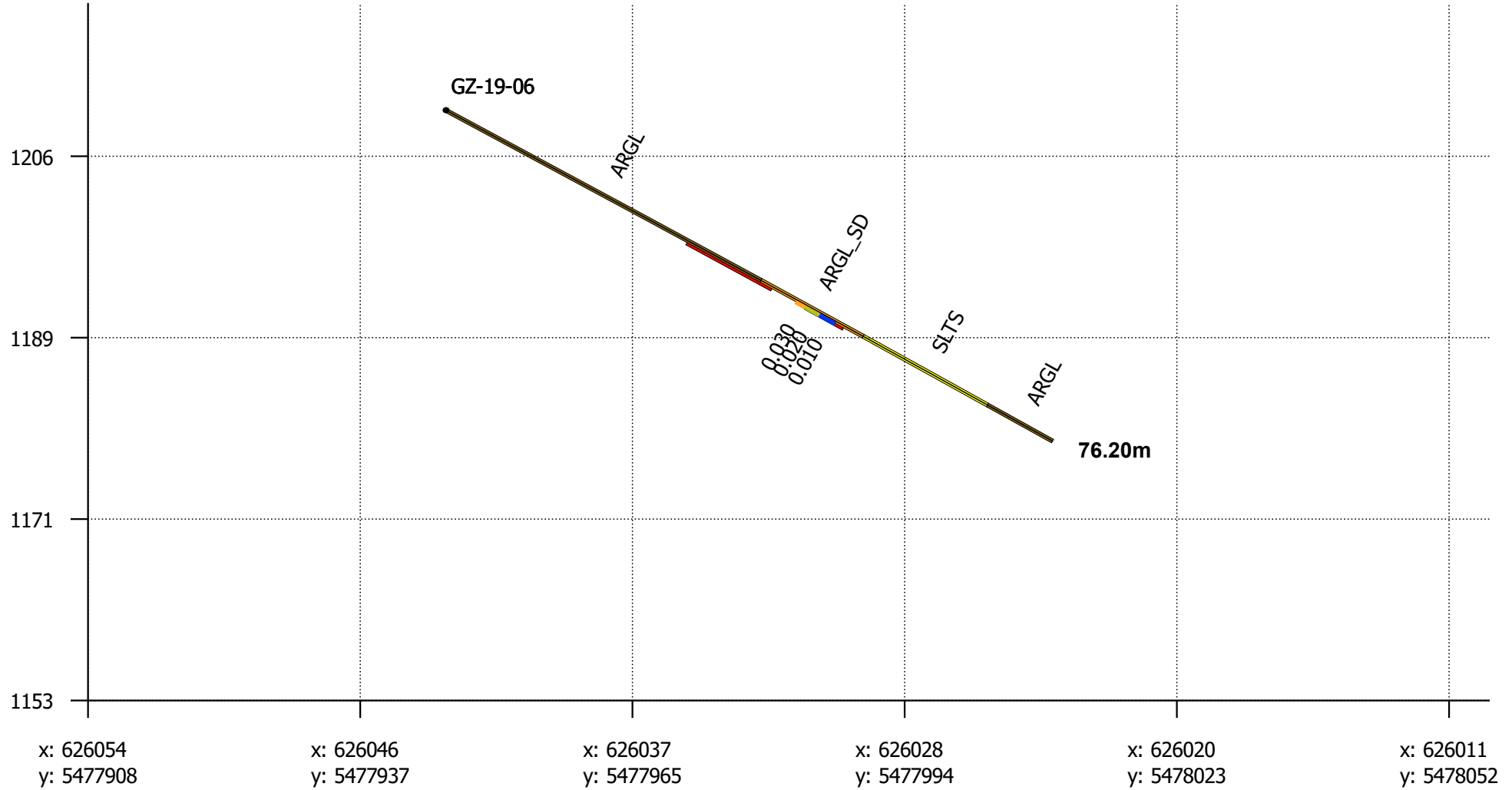
Vertical exaggeration: 1x



**A**

**B**

# GZ-19-06



## Legend

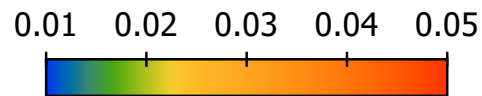
### Vein Type

- QFS (pink square)
- QK (light pink square)
- QPY (purple square)
- QS (red square)
- QZ (dark red square)
- SIQS (red square)
- SUL (yellow square)

### Lithology

- ARGL (brown square)
- ARGL\_QVN (red square)
- ARGL\_SD (orange square)
- OVB (green square)
- SLTS (yellow square)

### Pb %



Scale: 1:640

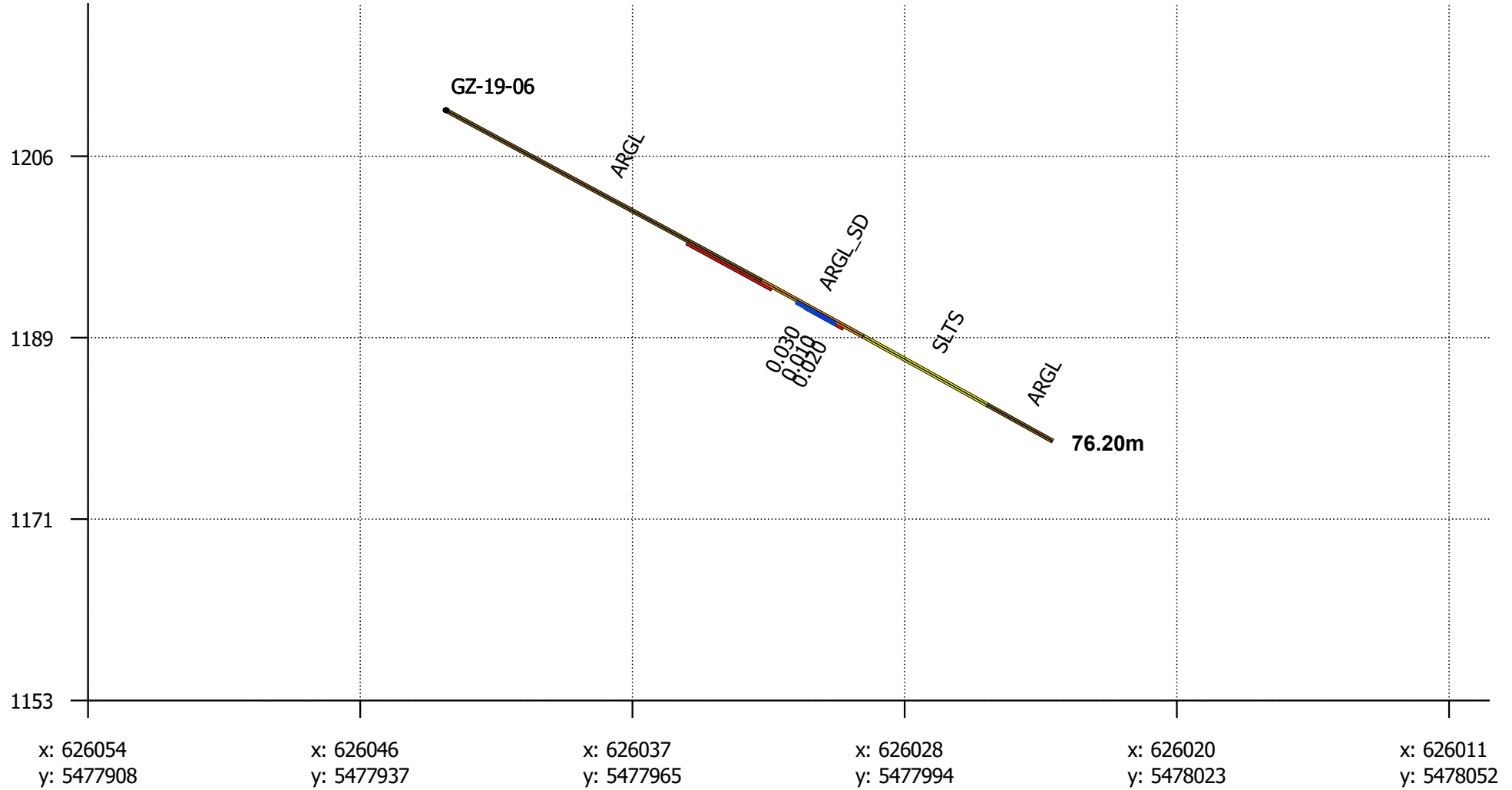
Vertical exaggeration: 1x



**A**

**B**

# GZ-19-06



## Legend

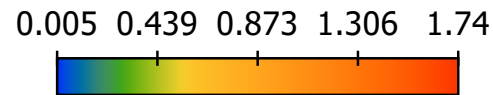
### Vein Type

- QFS
- QK
- QPY
- QS
- QZ
- SIQS
- SUL

### Lithology

- ARGL
- ARGL\_QVN
- ARGL\_SD
- OVB
- SLTS

### Zn %



Scale: 1:640

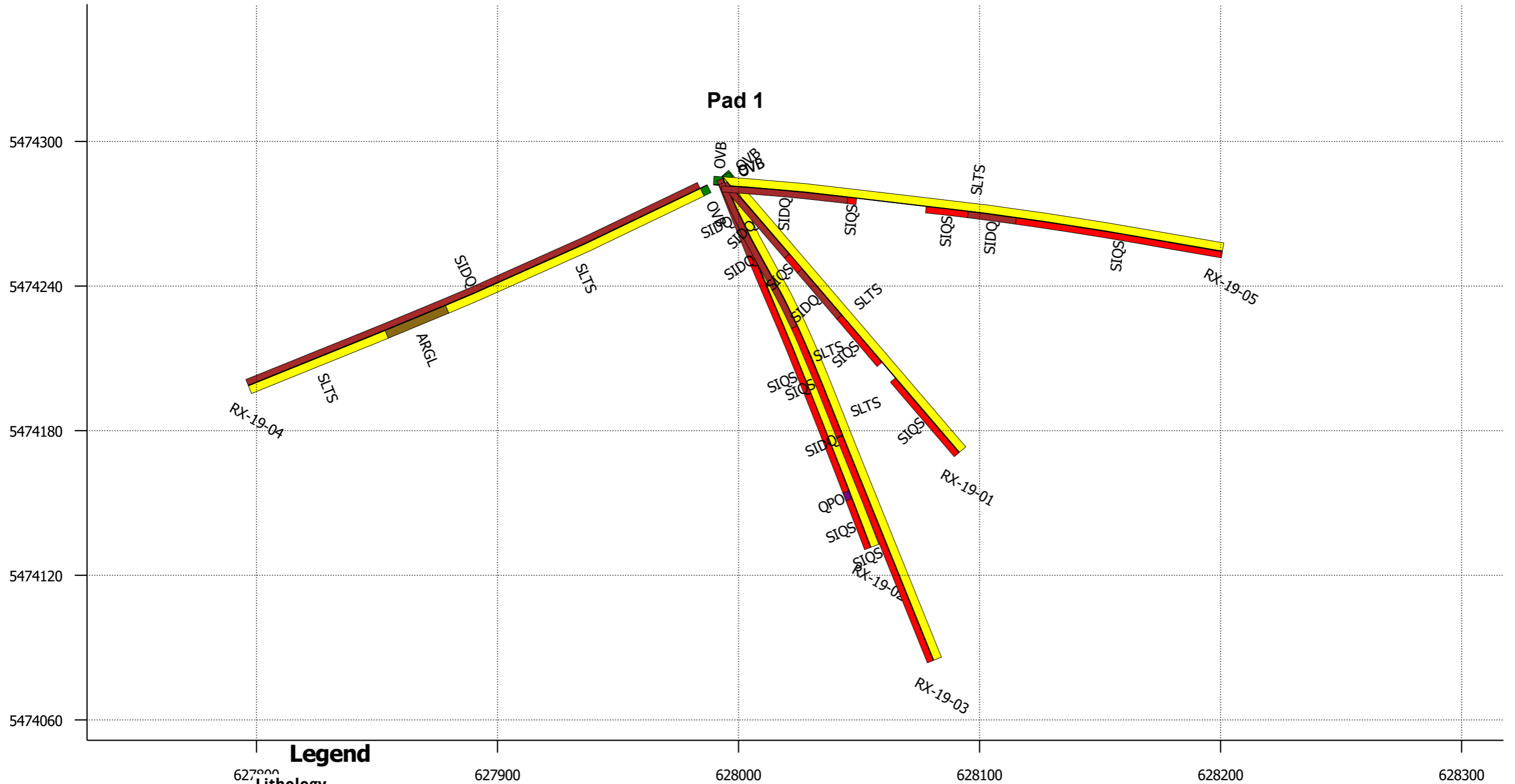
Vertical exaggeration: 1x



# Rex Zone - Planview with Lithology and Vein Type

W

E



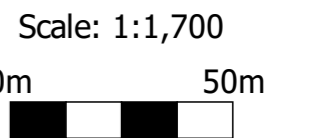
## Legend

- Lithology**
- ARGL
  - SLTS
  - OVB

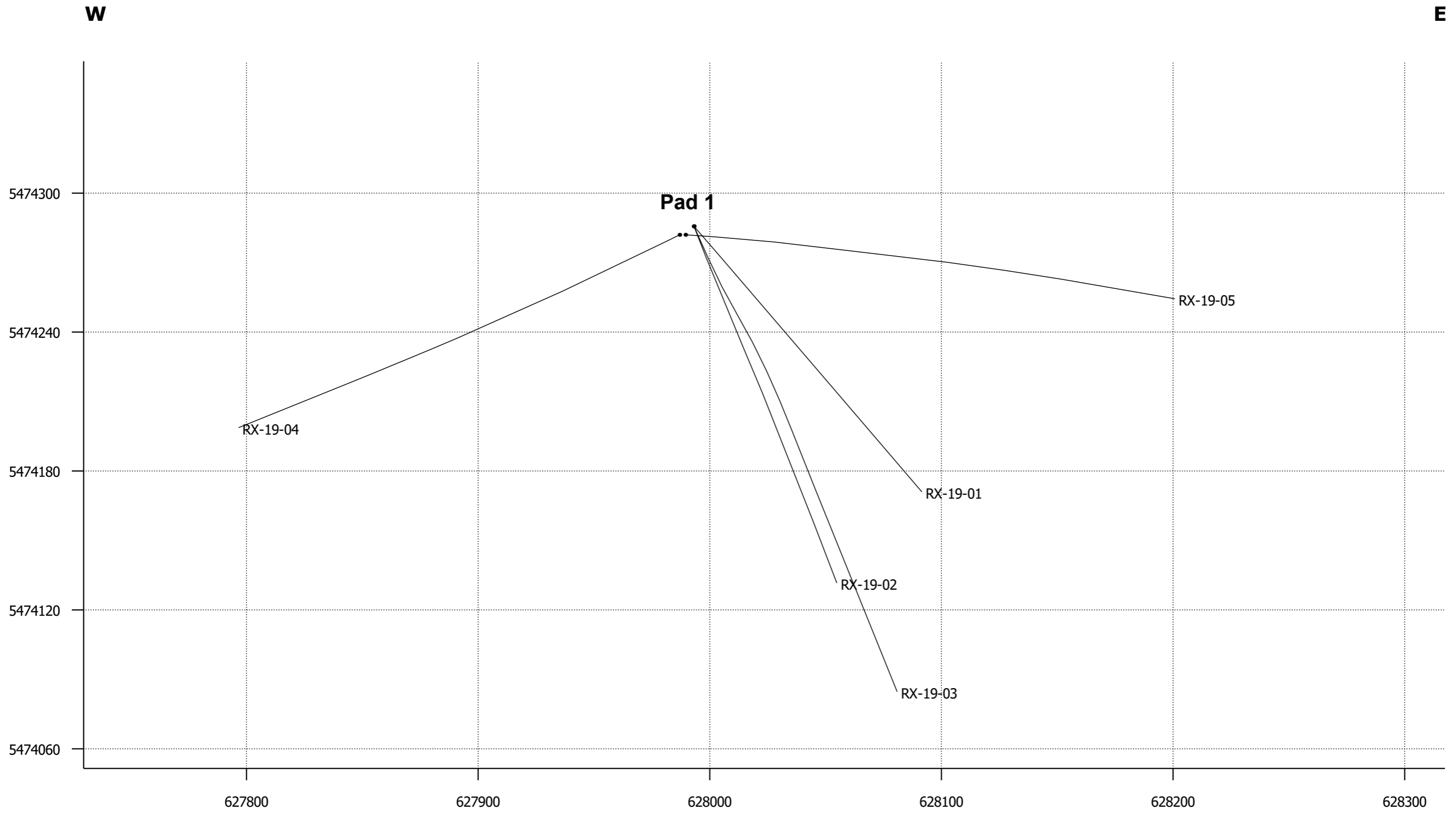
## Location

W: 627730, 5474357  
 E: 628317, 5474357

- Vein Type**
- QPO
  - SIQS
  - SIDQ



# Rex Zone - Planview DDH Locations



## Location

W: 627730, 5474357

E: 628317, 5474357

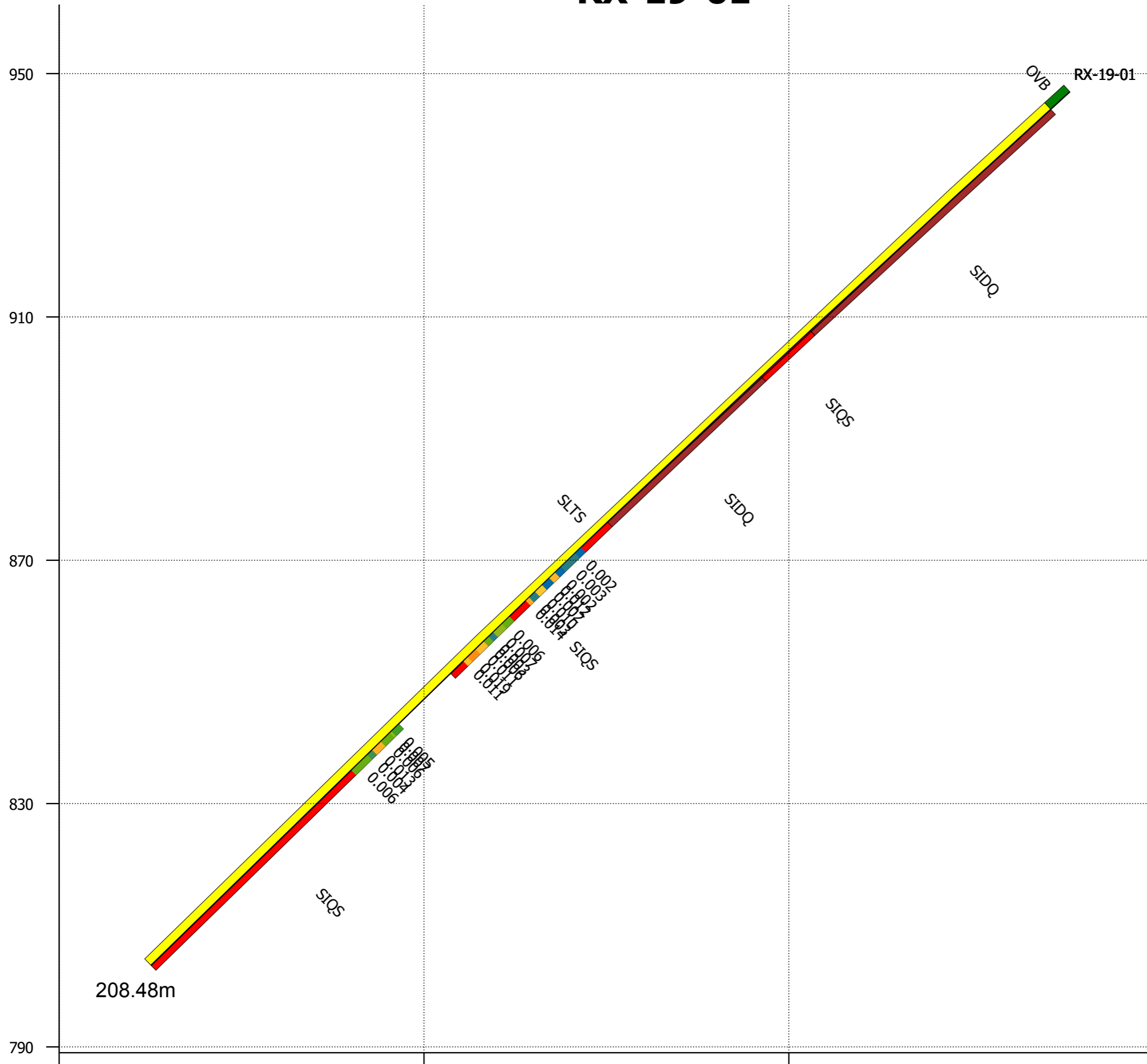
Scale: 1:1,700



NNW

# RX-19-01

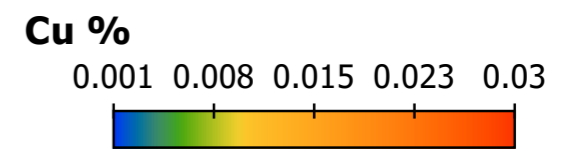
SSE



## Legend

- Lithology**
- ARGL
  - SLTS
  - OVB

- Vein Type**
- QPO
  - SIQS
  - SIDQ



Scale: 1:710

Vertical exaggeration: 1x



x: 628103  
y: 5474161

x: 628064  
y: 5474207

x: 628025  
y: 5474252

x: 627987  
y: 5474298



# RX-19-03

SSE

NNW



## Legend

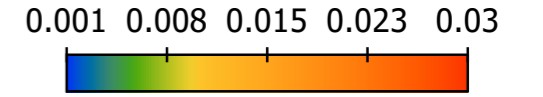
### Lithology

- ARGL
- SLTS
- OVB

### Vein Type

- QPO
- SIQS
- SIDQ

### Cu %



Scale: 1:840

Vertical exaggeration: 1x



x: 628088  
y: 5474074

x: 628068  
y: 5474119

x: 628048  
y: 5474165

x: 628028  
y: 5474211

x: 628008  
y: 5474257

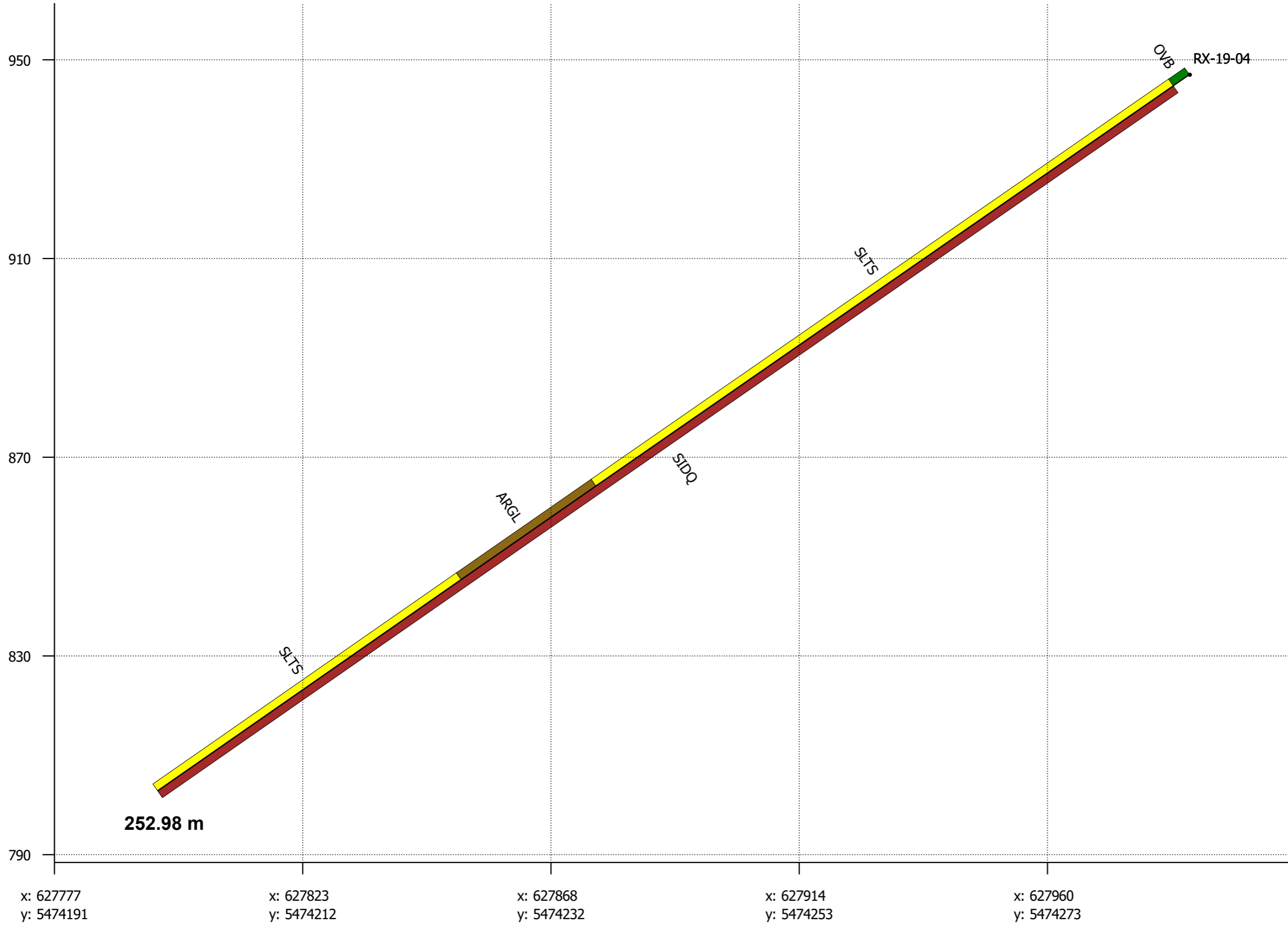
x: 627988  
y: 5474303



SW

# RX-19-04

NE



## Legend

### Lithology

- ARGL
- SLTS
- OVB

### Vein Type

- QPO
- SIQS
- SIDQ

Scale: 1:800

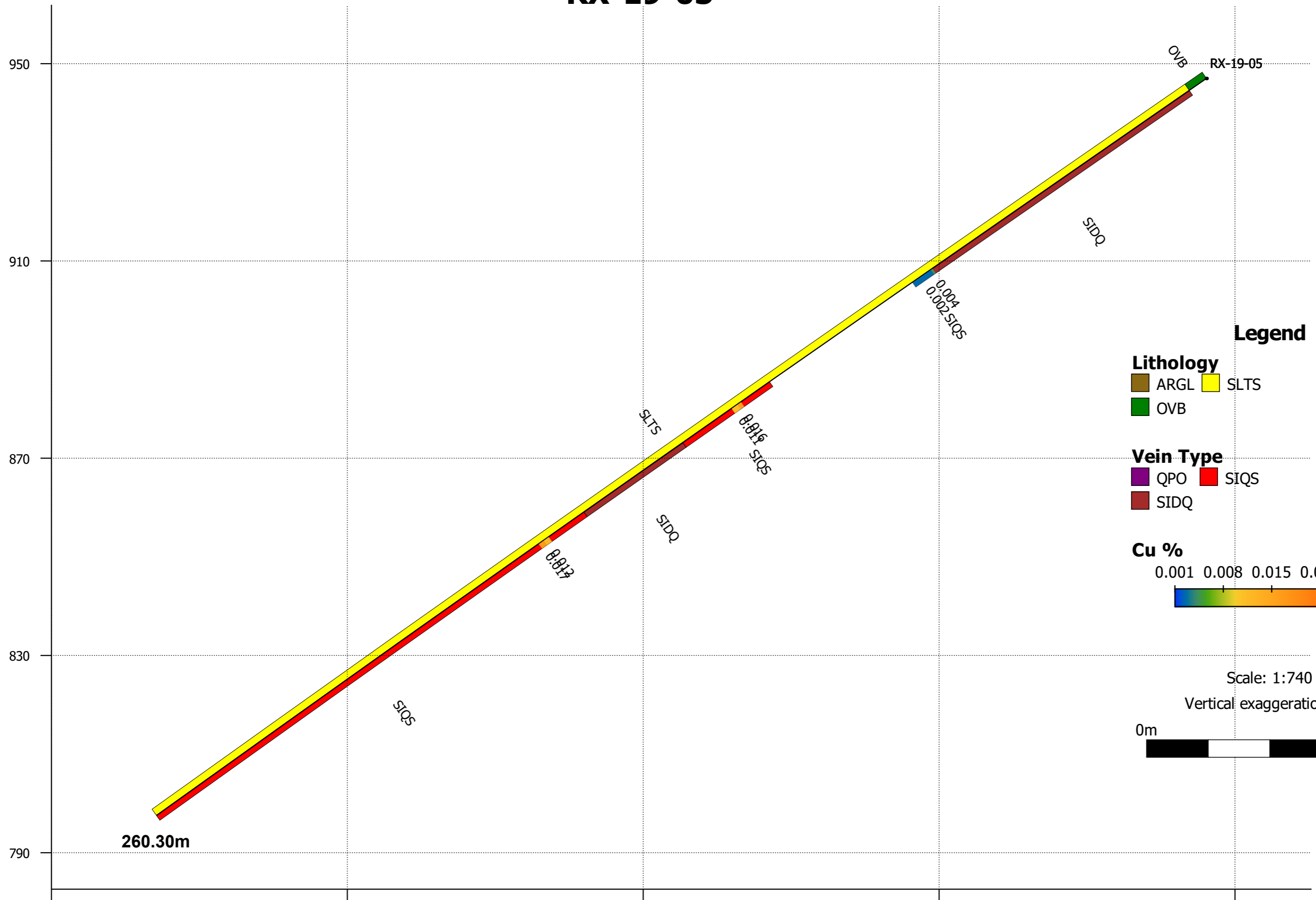
Vertical exaggeration: 1x



SE

# RX-19-05

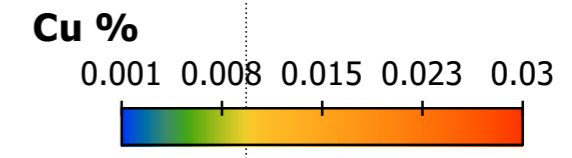
NW



## Legend

- Lithology**
- ARGL
  - SLTS
  - OVB

- Vein Type**
- QPO
  - SIQS
  - SIDQ



Scale: 1:740

Vertical exaggeration: 1x



x: 628222  
y: 5474251

x: 628163  
y: 5474261

x: 628103  
y: 5474270

x: 628044  
y: 5474279

x: 627985  
y: 5474289

## **Appendix VII - Analytic Certificates**



Bureau Veritas Commodities Canada Ltd.  
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada  
PHONE (604) 253-3158

**Client:** **Bul River Mineral Corporation**  
Box 845  
Cranbrook British Columbia V1C 4J6 Canada

Submitted By: Jill Christmann  
Receiving Lab: Canada-Vancouver  
Received: August 22, 2019  
Report Date: September 12, 2019  
Page: 1 of 4

# CERTIFICATE OF ANALYSIS

VAN19002348.1

## CLIENT JOB INFORMATION

Project: Bul River  
Shipment ID: BR-EXP\_2019\_03  
P.O. Number  
Number of Samples: 73

## SAMPLE DISPOSAL

IMM-PLP Return immediately after analysis  
DISP-RJT Dispose of Reject After 60 days

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

## SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
PRP70-250	66	Crush, split and pulverize 250 g rock to 200 mesh			VAN
PULSW	66	Extra Wash with Silica between each sample			VAN
SLBHP	7	Sort, label and box pulps			VAN
FA330-Au	73	Fire assay fusion Au by ICP-ES	30	Completed	VAN
EN002	73	Environmental disposal charge-Fire assay lead waste			VAN
MA370	73	4-Acid Digestion ICP-ES Finish	0.5	Completed	VAN
EN001-MA	73	Environmental disposal fee - Multi-acid neutralization			VAN
AQ200	73	1:1:1 Aqua Regia digestion ICP-MS analysis	0.5	Completed	VAN

## ADDITIONAL COMMENTS

Invoice To: Bul River Mineral Corporation  
Box 845  
Cranbrook British Columbia V1C 4J6  
Canada

CC: Tim Hewison

  
LILYBETH DE VERA-BOY  
Fire Assay Spectroscopy Manager



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada  
PHONE (604) 253-3158

Project: Bul River  
Report Date: September 12, 2019

Page: 2 of 4

Part: 1 of 4

# CERTIFICATE OF ANALYSIS

VAN19002348.1

Method	WGHT	FA330	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370
Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Sr	Cd	Sb	Bi	Ca	P	Cr	Mg	
Unit	kg	ppb	%	%	%	%	ppm	%	%	%	%	%	%	%	%	%	%	%	%	%	
MDL	0.01	2	0.001	0.001	0.02	0.01	2	0.001	0.001	0.01	0.01	0.02	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.001	0.01
0027161	Drill Core	3.10	7	<0.001	0.004	<0.02	0.01	<2	0.002	<0.001	0.01	2.91	<0.02	<0.01	<0.001	<0.01	<0.01	0.03	0.04	0.003	0.32
0027162	Drill Core	1.43	12	<0.001	0.008	<0.02	0.02	<2	0.002	<0.001	<0.01	2.91	<0.02	<0.01	<0.001	<0.01	<0.01	0.07	0.05	0.004	0.29
0027163	Drill Core	2.16	7	<0.001	0.007	<0.02	0.01	<2	0.002	0.001	0.01	2.63	<0.02	<0.01	<0.001	<0.01	<0.01	0.07	0.04	0.003	0.31
0027164	Drill Core	2.10	11	<0.001	0.005	<0.02	0.01	<2	0.002	<0.001	<0.01	4.21	<0.02	<0.01	<0.001	<0.01	<0.01	0.05	0.05	0.003	0.28
0027165	Drill Core	2.24	6	<0.001	0.006	0.03	0.01	<2	0.002	<0.001	<0.01	3.27	<0.02	<0.01	<0.001	<0.01	<0.01	0.04	0.03	0.004	0.33
0027166	Drill Core	1.23	20	<0.001	0.019	0.04	0.04	<2	0.004	0.002	0.01	5.89	<0.02	<0.01	<0.001	<0.01	<0.01	0.03	0.05	0.004	0.35
0027167	Drill Core	1.40	19	<0.001	0.025	0.04	0.04	<2	0.004	0.001	<0.01	8.13	<0.02	<0.01	<0.001	<0.01	<0.01	0.05	0.09	0.004	0.30
0027168	Drill Core	1.63	9	<0.001	0.014	0.04	0.02	<2	0.003	<0.001	<0.01	4.14	<0.02	<0.01	<0.001	<0.01	<0.01	0.03	0.05	0.003	0.29
0027169	Drill Core	1.51	8	<0.001	0.007	0.04	0.03	<2	0.003	<0.001	<0.01	4.31	<0.02	<0.01	<0.001	<0.01	<0.01	0.05	0.04	0.002	0.27
0027170	Rock Pulp	0.11	188	<0.001	0.141	0.05	0.19	11	0.002	0.002	0.07	7.88	0.03	<0.01	<0.001	<0.01	<0.01	1.27	0.03	0.006	1.91
0027171	Drill Core	1.27	11	<0.001	0.005	0.04	0.02	<2	0.003	<0.001	0.02	4.88	<0.02	<0.01	<0.001	<0.01	<0.01	0.04	0.04	0.003	0.27
0027172	Drill Core	1.33	13	<0.001	0.010	0.05	0.02	<2	0.003	<0.001	<0.01	4.20	<0.02	<0.01	<0.001	<0.01	<0.01	0.03	0.04	0.004	0.32
0027173	Drill Core	1.99	14	<0.001	0.006	0.07	0.02	<2	0.002	<0.001	<0.01	5.09	<0.02	<0.01	<0.001	<0.01	<0.01	0.03	0.07	0.004	0.28
0027174	Drill Core	2.11	9	<0.001	0.003	0.03	0.01	<2	0.001	<0.001	<0.01	3.63	<0.02	<0.01	<0.001	<0.01	<0.01	0.03	0.04	0.003	0.32
0027175	Drill Core	2.22	8	<0.001	0.001	<0.02	<0.01	<2	<0.001	<0.001	<0.01	2.35	<0.02	<0.01	<0.001	<0.01	<0.01	0.02	0.02	0.003	0.35
0027176	Drill Core	2.36	6	<0.001	0.003	<0.02	0.01	<2	0.001	<0.001	<0.01	3.14	<0.02	<0.01	<0.001	<0.01	<0.01	0.03	0.04	0.003	0.31
0027177	Drill Core	3.43	6	<0.001	0.002	<0.02	0.01	<2	0.001	<0.001	<0.01	3.06	<0.02	<0.01	<0.001	<0.01	<0.01	0.01	0.05	0.003	0.34
0027178	Drill Core	2.74	10	<0.001	0.006	<0.02	0.02	<2	0.002	<0.001	<0.01	4.73	<0.02	<0.01	<0.001	<0.01	<0.01	0.01	0.07	0.004	0.34
0027179	Drill Core	1.61	13	<0.001	0.023	0.04	0.08	<2	0.004	0.003	0.10	9.34	<0.02	<0.01	<0.001	<0.01	<0.01	<0.01	0.05	0.004	0.29
0027180	Rock Pulp	0.11	8	<0.001	0.002	<0.02	<0.01	<2	<0.001	<0.001	0.07	2.80	<0.02	0.02	<0.001	<0.01	<0.01	1.66	0.04	<0.001	0.55
0027181	Drill Core	3.53	5	<0.001	0.005	<0.02	0.04	<2	0.002	<0.001	<0.01	3.56	<0.02	<0.01	<0.001	<0.01	<0.01	0.02	0.04	0.003	0.31
0027182	Drill Core	4.38	8	<0.001	0.003	<0.02	0.03	<2	0.001	<0.001	<0.01	3.42	<0.02	<0.01	<0.001	<0.01	<0.01	0.02	0.04	0.004	0.32
0027183	Drill Core	3.43	5	<0.001	0.002	<0.02	0.02	<2	0.001	<0.001	0.01	3.85	<0.02	<0.01	<0.001	<0.01	<0.01	<0.01	0.05	0.003	0.32
0027184	Drill Core	3.34	6	<0.001	0.003	<0.02	0.02	<2	0.002	<0.001	<0.01	3.10	<0.02	<0.01	<0.001	<0.01	<0.01	0.03	0.04	0.003	0.34
0027185	Drill Core	3.74	6	<0.001	0.005	<0.02	0.03	<2	0.002	<0.001	<0.01	2.84	<0.02	<0.01	<0.001	<0.01	<0.01	0.07	0.04	0.004	0.38
0027186	Drill Core	3.41	7	<0.001	0.003	<0.02	0.02	<2	0.001	<0.001	<0.01	3.46	<0.02	<0.01	<0.001	<0.01	<0.01	0.05	0.04	0.003	0.35
0027187	Drill Core	3.33	11	<0.001	0.016	0.04	0.07	<2	0.003	0.001	<0.01	7.23	<0.02	<0.01	<0.001	<0.01	<0.01	0.05	0.06	0.003	0.33
0027188	Drill Core	2.40	10	<0.001	0.008	<0.02	0.03	<2	0.003	0.001	<0.01	4.21	<0.02	<0.01	<0.001	<0.01	<0.01	0.04	0.03	0.004	0.41
0027189	Drill Core	3.36	7	<0.001	0.006	0.03	0.03	<2	0.002	<0.001	<0.01	3.58	<0.02	<0.01	<0.001	<0.01	<0.01	0.07	0.04	0.003	0.39
0027190	Rock Pulp	0.11	188	<0.001	0.139	0.05	0.19	13	0.002	0.002	0.07	8.24	0.03	<0.01	<0.001	<0.01	<0.01	1.26	0.03	0.006	1.90



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **Bul River Mineral Corporation**

Box 845

Cranbrook British Columbia V1C 4J6 Canada

Project: Bul River

Report Date: September 12, 2019

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# CERTIFICATE OF ANALYSIS

VAN19002348.1

Method	MA370	MA370	MA370	MA370	MA370	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200
Analyte	Al	Na	K	W	S	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	
Unit	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	
MDL	0.01	0.01	0.01	0.01	0.05	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	
0027161	Drill Core	8.62	0.67	3.73	<0.01	<0.05	1.6	43.8	149.4	99	0.3	14.5	4.9	116	2.34	1.8	2.4	10.3	4	0.3	1.7
0027162	Drill Core	8.45	0.67	3.26	<0.01	<0.05	1.7	88.9	132.0	207	0.1	14.5	9.0	94	2.39	2.2	4.2	8.2	7	0.5	7.3
0027163	Drill Core	8.71	0.45	3.18	<0.01	<0.05	2.7	73.8	119.6	99	0.2	11.5	12.3	115	2.16	2.3	3.1	7.1	10	0.2	3.8
0027164	Drill Core	7.62	0.38	3.02	<0.01	<0.05	2.0	46.7	159.0	114	0.3	12.0	2.8	43	3.65	2.4	3.2	6.9	9	<0.1	4.7
0027165	Drill Core	8.83	0.34	3.68	<0.01	<0.05	2.1	68.9	262.5	114	0.2	12.2	3.1	31	2.79	1.8	2.5	8.8	7	<0.1	2.5
0027166	Drill Core	10.19	0.35	4.18	<0.01	0.11	4.0	190.3	382.0	342	0.4	36.8	16.5	121	4.97	5.7	5.6	10.6	6	0.4	13.3
0027167	Drill Core	8.54	0.30	3.47	<0.01	<0.05	5.2	264.3	402.4	365	0.3	41.7	11.3	73	7.27	5.0	7.3	10.4	10	0.6	7.8
0027168	Drill Core	9.04	0.24	3.49	<0.01	<0.05	2.1	137.2	337.2	188	0.2	25.6	5.6	52	3.58	1.3	1.8	9.0	7	0.7	2.3
0027169	Drill Core	6.68	0.18	2.58	<0.01	<0.05	1.8	68.7	386.4	262	0.3	23.7	6.9	87	3.81	1.4	1.5	5.8	5	0.9	2.0
0027170	Rock Pulp	5.81	0.14	1.26	<0.01	3.99	3.2	1318.6	516.7	1821	11.8	20.4	22.9	657	7.49	290.7	144.8	0.3	28	12.9	22.7
0027171	Drill Core	7.27	0.14	2.87	<0.01	<0.05	2.2	59.2	370.0	236	0.2	27.1	10.6	183	4.29	2.0	2.0	6.2	5	1.0	2.2
0027172	Drill Core	8.89	0.19	3.64	<0.01	<0.05	2.7	112.7	482.1	232	0.3	20.0	6.6	38	3.61	1.8	3.6	8.3	5	0.7	3.2
0027173	Drill Core	7.73	0.11	3.23	<0.01	<0.05	2.3	63.2	674.7	202	0.2	21.4	4.9	28	4.53	1.7	5.9	6.7	5	0.3	4.4
0027174	Drill Core	8.12	0.22	3.55	<0.01	<0.05	2.5	35.0	289.4	150	0.2	11.0	2.6	34	3.13	2.9	3.3	7.3	6	0.2	1.7
0027175	Drill Core	9.00	0.23	4.09	<0.01	<0.05	2.1	15.1	79.1	63	0.1	4.8	1.4	24	1.81	1.6	1.8	7.9	5	<0.1	0.7
0027176	Drill Core	7.98	0.27	3.39	<0.01	0.05	2.0	26.5	170.7	143	0.2	8.9	2.6	36	2.53	1.2	<0.5	8.0	10	<0.1	0.6
0027177	Drill Core	8.48	0.35	3.55	<0.01	0.09	2.1	24.7	148.3	130	0.2	11.7	2.1	25	2.52	2.0	0.5	7.7	11	<0.1	0.6
0027178	Drill Core	8.58	0.40	3.54	<0.01	0.08	2.4	67.3	200.9	250	0.3	14.7	5.3	98	4.05	3.2	1.0	8.7	7	0.3	1.1
0027179	Drill Core	7.94	0.53	3.10	<0.01	0.31	3.7	236.1	355.3	748	0.6	39.3	31.1	970	8.34	5.1	5.9	7.7	9	0.7	2.7
0027180	Rock Pulp	7.71	3.51	1.59	<0.01	<0.05	4.4	23.1	1.1	32	<0.1	7.4	4.5	578	2.36	2.2	0.5	1.1	30	<0.1	0.2
0027181	Drill Core	8.55	0.78	3.63	<0.01	<0.05	2.5	50.8	90.1	433	0.1	11.0	3.9	97	3.01	2.2	<0.5	10.4	4	0.3	1.0
0027182	Drill Core	8.64	0.64	3.78	<0.01	<0.05	2.5	27.2	77.1	303	0.1	8.2	3.8	65	2.79	7.1	1.3	9.8	4	0.1	2.0
0027183	Drill Core	8.17	0.39	3.43	<0.01	0.10	2.3	25.9	141.5	213	0.2	9.2	4.1	142	3.24	2.1	<0.5	9.3	13	<0.1	1.2
0027184	Drill Core	8.47	0.42	3.69	<0.01	<0.05	1.9	34.5	176.0	239	0.2	11.5	4.5	60	2.56	2.4	0.6	9.0	7	0.2	1.0
0027185	Drill Core	8.56	0.45	3.80	<0.01	<0.05	1.4	52.7	169.6	257	0.2	20.4	6.7	52	2.32	2.9	<0.5	10.7	7	0.6	1.3
0027186	Drill Core	8.54	0.29	3.75	<0.01	<0.05	1.8	37.2	203.9	230	0.2	10.5	4.5	20	2.94	3.1	<0.5	8.4	6	0.3	1.5
0027187	Drill Core	8.42	0.36	3.44	<0.01	<0.05	2.0	174.5	447.9	661	0.3	30.2	9.8	68	6.69	5.0	1.7	8.3	8	0.4	1.8
0027188	Drill Core	10.24	0.42	4.42	<0.01	<0.05	2.1	83.6	189.8	334	0.3	24.6	12.0	82	3.54	19.9	1.7	10.1	5	1.7	1.8
0027189	Drill Core	8.51	0.32	3.55	<0.01	<0.05	1.7	63.0	321.9	292	0.3	19.7	6.3	31	3.09	3.5	<0.5	7.2	11	0.8	1.1
0027190	Rock Pulp	5.74	0.14	1.30	<0.01	4.11	3.1	1354.6	542.2	1863	11.9	19.4	23.8	650	7.63	298.8	150.5	0.3	27	13.3	22.1



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **Bul River Mineral Corporation**

Box 845

Cranbrook British Columbia V1C 4J6 Canada

Project: Bul River

Report Date: September 12, 2019

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# CERTIFICATE OF ANALYSIS

VAN19002348.1

Method	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	
Analyte	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	
Unit	ppm	ppm	%	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	
MDL	0.1	1	0.01	0.001	1	1	0.01	1	0.001	20	0.01	0.001	0.01	0.1	0.01	0.1	0.01	0.05	1	0.5	
0027161	Drill Core	1.9	4	0.02	0.042	35	3	0.02	33	<0.001	<20	0.45	0.013	0.28	<0.1	0.02	1.9	<0.1	<0.05	<1	<0.5
0027162	Drill Core	1.5	3	0.07	0.051	22	3	0.02	32	<0.001	<20	0.50	0.008	0.17	<0.1	0.05	1.8	<0.1	<0.05	<1	<0.5
0027163	Drill Core	1.2	3	0.07	0.039	19	4	0.03	35	<0.001	<20	0.78	0.012	0.23	<0.1	0.05	1.6	<0.1	<0.05	<1	<0.5
0027164	Drill Core	1.3	3	0.05	0.046	19	3	0.02	26	<0.001	<20	0.29	0.013	0.18	<0.1	0.06	1.2	<0.1	0.05	<1	<0.5
0027165	Drill Core	1.4	3	0.05	0.034	29	3	0.03	31	<0.001	<20	0.41	0.010	0.24	<0.1	0.07	1.6	<0.1	<0.05	<1	<0.5
0027166	Drill Core	3.5	4	0.03	0.050	39	3	0.02	21	<0.001	<20	0.52	0.006	0.19	<0.1	0.09	2.2	<0.1	0.11	<1	<0.5
0027167	Drill Core	3.4	4	0.05	0.085	35	3	0.03	24	<0.001	<20	0.57	0.009	0.23	<0.1	0.10	3.1	<0.1	<0.05	<1	<0.5
0027168	Drill Core	1.1	4	0.04	0.045	34	3	0.02	20	<0.001	<20	0.70	0.007	0.19	<0.1	0.05	3.2	<0.1	<0.05	<1	<0.5
0027169	Drill Core	1.1	8	0.05	0.041	23	5	0.08	22	<0.001	<20	0.65	0.009	0.19	<0.1	0.08	2.3	<0.1	<0.05	2	<0.5
0027170	Rock Pulp	7.8	26	1.19	0.026	4	40	1.62	108	0.003	<20	1.73	0.010	0.16	1.9	1.85	4.4	2.2	3.86	5	23.9
0027171	Drill Core	1.3	8	0.04	0.040	22	5	0.06	24	<0.001	<20	0.52	0.007	0.17	0.1	0.09	2.6	0.1	<0.05	2	<0.5
0027172	Drill Core	2.0	6	0.04	0.036	37	4	0.04	29	<0.001	<20	0.59	0.009	0.27	<0.1	0.07	2.4	0.1	<0.05	1	<0.5
0027173	Drill Core	1.8	8	0.03	0.068	17	4	0.04	29	<0.001	<20	0.45	0.006	0.20	<0.1	0.12	2.2	<0.1	<0.05	2	<0.5
0027174	Drill Core	1.5	6	0.03	0.041	23	5	0.04	29	<0.001	<20	0.47	0.011	0.26	<0.1	0.06	1.7	<0.1	<0.05	1	<0.5
0027175	Drill Core	0.9	3	0.02	0.019	24	3	0.02	25	<0.001	<20	0.31	0.012	0.23	<0.1	0.05	1.1	<0.1	<0.05	<1	<0.5
0027176	Drill Core	0.9	6	0.03	0.037	28	5	0.03	30	<0.001	<20	0.52	0.018	0.26	<0.1	0.04	1.8	<0.1	0.06	2	<0.5
0027177	Drill Core	1.1	5	0.01	0.061	27	5	0.05	28	<0.001	<20	0.52	0.013	0.23	<0.1	0.05	2.1	<0.1	0.09	1	<0.5
0027178	Drill Core	1.7	6	0.01	0.074	27	6	0.06	35	<0.001	<20	0.69	0.012	0.28	<0.1	0.12	2.3	<0.1	0.08	2	0.5
0027179	Drill Core	3.0	5	<0.01	0.051	29	4	0.03	38	<0.001	<20	0.64	0.007	0.18	<0.1	0.34	2.7	0.1	0.30	1	0.8
0027180	Rock Pulp	<0.1	21	0.74	0.042	6	16	0.48	58	0.077	<20	1.00	0.063	0.07	0.2	<0.01	2.6	<0.1	<0.05	4	<0.5
0027181	Drill Core	1.0	4	0.02	0.046	40	4	0.03	33	<0.001	<20	0.47	0.016	0.28	<0.1	0.07	2.4	<0.1	<0.05	<1	<0.5
0027182	Drill Core	1.3	3	0.01	0.042	35	3	0.02	27	<0.001	<20	0.31	0.012	0.21	<0.1	0.06	1.9	<0.1	<0.05	<1	<0.5
0027183	Drill Core	1.1	6	<0.01	0.054	38	5	0.04	37	<0.001	<20	0.48	0.014	0.25	<0.1	0.09	2.1	<0.1	0.10	1	<0.5
0027184	Drill Core	1.2	4	0.03	0.051	33	4	0.05	29	<0.001	<20	0.46	0.009	0.22	<0.1	0.10	2.1	<0.1	<0.05	1	<0.5
0027185	Drill Core	1.5	5	0.07	0.046	61	5	0.09	30	<0.001	<20	0.63	0.011	0.27	<0.1	0.08	1.9	<0.1	<0.05	1	<0.5
0027186	Drill Core	1.4	5	0.06	0.042	32	4	0.04	27	<0.001	<20	0.42	0.010	0.22	<0.1	0.10	1.6	<0.1	<0.05	1	<0.5
0027187	Drill Core	2.6	6	0.06	0.058	28	5	0.05	35	<0.001	<20	0.64	0.009	0.24	<0.1	0.20	2.6	<0.1	<0.05	2	<0.5
0027188	Drill Core	1.6	3	0.04	0.027	45	3	0.06	23	<0.001	<20	0.52	0.006	0.22	<0.1	0.08	1.1	<0.1	<0.05	<1	<0.5
0027189	Drill Core	1.2	6	0.07	0.045	23	6	0.12	30	<0.001	<20	0.76	0.013	0.27	<0.1	0.07	2.3	0.2	<0.05	2	<0.5
0027190	Rock Pulp	7.7	27	1.19	0.025	5	41	1.63	112	0.004	<20	1.79	0.011	0.17	0.4	1.87	4.5	2.3	3.94	6	23.9



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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:** **Bul River Mineral Corporation**

Box 845

Cranbrook British Columbia V1C 4J6 Canada

Project: Bul River

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# CERTIFICATE OF ANALYSIS

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Method	AQ200	
Analyte	Te	
Unit	ppm	
MDL	0.2	
0027161	Drill Core	<0.2
0027162	Drill Core	<0.2
0027163	Drill Core	<0.2
0027164	Drill Core	<0.2
0027165	Drill Core	<0.2
0027166	Drill Core	0.4
0027167	Drill Core	0.3
0027168	Drill Core	<0.2
0027169	Drill Core	<0.2
0027170	Rock Pulp	0.2
0027171	Drill Core	<0.2
0027172	Drill Core	0.2
0027173	Drill Core	<0.2
0027174	Drill Core	<0.2
0027175	Drill Core	<0.2
0027176	Drill Core	<0.2
0027177	Drill Core	<0.2
0027178	Drill Core	<0.2
0027179	Drill Core	0.3
0027180	Rock Pulp	<0.2
0027181	Drill Core	<0.2
0027182	Drill Core	<0.2
0027183	Drill Core	<0.2
0027184	Drill Core	<0.2
0027185	Drill Core	<0.2
0027186	Drill Core	<0.2
0027187	Drill Core	0.3
0027188	Drill Core	0.3
0027189	Drill Core	<0.2
0027190	Rock Pulp	0.2





Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada  
PHONE (604) 253-3158

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# CERTIFICATE OF ANALYSIS

VAN19002348.1

Method	WGHT	FA330	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	
Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Sr	Cd	Sb	Bi	Ca	P	Cr	Mg	
Unit	kg	ppb	%	%	%	%	ppm	%	%	%	%	%	%	%	%	%	%	%	%	%	
MDL	0.01	2	0.001	0.001	0.02	0.01	2	0.001	0.001	0.01	0.01	0.02	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01	
0027191	Drill Core	3.91	6	<0.001	0.004	0.03	0.04	<2	0.003	<0.001	<0.01	3.59	<0.02	<0.01	<0.001	<0.01	<0.01	0.09	0.05	0.004	0.42
0027192	Drill Core	2.95	5	<0.001	0.001	<0.02	0.04	<2	0.002	<0.001	<0.01	2.67	<0.02	<0.01	<0.001	<0.01	<0.01	0.17	0.05	0.004	0.44
0027193	Drill Core	2.83	7	<0.001	0.004	<0.02	0.03	<2	0.002	<0.001	<0.01	2.33	<0.02	<0.01	<0.001	<0.01	<0.01	0.08	0.05	0.003	0.36
0027194	Drill Core	2.55	9	<0.001	0.007	<0.02	0.05	<2	0.003	0.003	0.04	4.58	<0.02	<0.01	<0.001	<0.01	<0.01	0.32	0.04	0.004	0.41
0027195	Drill Core	4.21	8	<0.001	0.004	<0.02	0.02	<2	0.002	<0.001	<0.01	3.45	<0.02	<0.01	<0.001	<0.01	<0.01	0.03	0.04	0.005	0.32
0027196	Drill Core	2.85	7	<0.001	0.005	<0.02	0.02	<2	0.002	<0.001	0.02	3.21	<0.02	<0.01	<0.001	<0.01	<0.01	0.03	0.04	0.005	0.34
0027197	Drill Core	2.45	9	<0.001	0.006	<0.02	0.01	<2	0.001	<0.001	<0.01	4.29	<0.02	<0.01	<0.001	<0.01	<0.01	0.03	0.04	0.005	0.40
0027198	Drill Core	2.35	9	<0.001	0.014	<0.02	0.03	<2	0.006	0.004	0.03	4.36	<0.02	<0.01	<0.001	<0.01	<0.01	0.12	0.04	0.004	0.47
0027199	Drill Core	2.61	7	<0.001	0.004	<0.02	0.01	<2	0.002	0.002	0.03	2.51	<0.02	<0.01	<0.001	<0.01	<0.01	0.11	0.03	0.005	0.51
0027200	Rock Pulp	0.11	4	<0.001	0.002	<0.02	<0.01	<2	<0.001	<0.001	0.07	2.61	<0.02	0.02	<0.001	<0.01	<0.01	1.56	0.04	0.002	0.53
0027201	Drill Core	1.99	4	<0.001	<0.001	<0.02	<0.01	<2	0.001	<0.001	0.07	3.01	<0.02	<0.01	<0.001	<0.01	<0.01	2.39	0.02	0.002	1.08
0027202	Drill Core	0.80	8	<0.001	0.009	<0.02	0.02	<2	0.005	0.003	0.03	3.72	<0.02	<0.01	<0.001	<0.01	<0.01	0.17	0.03	0.005	0.46
0027203	Drill Core	2.74	3	<0.001	0.002	0.03	0.07	<2	0.002	<0.001	0.06	2.63	<0.02	<0.01	<0.001	<0.01	<0.01	0.03	0.02	0.003	0.32
0027204	Drill Core	0.29	46	<0.001	0.009	>10	1.74	669	<0.001	0.001	0.03	1.93	<0.02	<0.01	0.014	0.07	0.02	<0.01	<0.01	<0.001	<0.01
0027205	Drill Core	0.42	10	<0.001	0.004	3.47	0.33	35	0.002	0.001	0.10	4.77	<0.02	<0.01	0.001	<0.01	<0.01	0.03	0.03	0.001	0.29
0027206	Drill Core	2.77	8	<0.001	0.007	0.08	0.08	<2	0.003	0.002	0.05	3.82	<0.02	<0.01	<0.001	<0.01	<0.01	0.02	0.03	0.004	0.31
0027207	Drill Core	3.49	4	<0.001	0.003	<0.02	0.01	<2	0.002	0.001	0.05	3.39	<0.02	<0.01	<0.001	<0.01	<0.01	0.05	0.03	0.004	0.42
0027208	Drill Core	2.68	3	<0.001	0.002	<0.02	0.02	<2	0.002	<0.001	0.07	3.42	<0.02	<0.01	<0.001	<0.01	<0.01	0.05	0.03	0.004	0.44
0027209	Drill Core	4.08	5	<0.001	0.001	<0.02	0.02	<2	0.002	<0.001	0.07	3.90	<0.02	<0.01	<0.001	<0.01	<0.01	0.48	0.03	0.004	0.50
0027210	Rock Pulp	0.11	497	0.001	3.867	0.24	3.70	77	0.006	0.032	0.08	28.60	<0.02	<0.01	0.011	<0.01	0.01	0.91	0.01	0.003	2.13
0027211	Drill Core	3.85	6	<0.001	0.001	0.02	0.02	<2	0.001	<0.001	0.02	3.26	<0.02	<0.01	<0.001	<0.01	<0.01	0.03	0.04	0.004	0.35
0027212	Drill Core	3.38	7	<0.001	0.003	0.03	0.03	<2	0.002	<0.001	0.02	3.41	<0.02	<0.01	<0.001	<0.01	<0.01	<0.01	0.03	0.003	0.31
0027213	Drill Core	1.31	11	<0.001	0.013	0.05	0.06	<2	0.004	0.002	0.08	4.51	<0.02	<0.01	<0.001	<0.01	<0.01	0.05	0.05	0.004	0.33
0027214	Drill Core	2.21	7	<0.001	0.005	0.02	0.05	<2	0.002	0.001	0.04	3.40	<0.02	<0.01	<0.001	<0.01	<0.01	0.02	0.04	0.004	0.34
0027215	Drill Core	3.23	4	<0.001	0.001	<0.02	0.06	<2	0.002	<0.001	0.07	1.73	<0.02	<0.01	<0.001	<0.01	<0.01	0.03	0.02	0.002	0.33
0027216	Drill Core	1.60	4	<0.001	0.002	<0.02	0.06	<2	0.002	0.001	0.10	3.37	<0.02	<0.01	<0.001	<0.01	<0.01	0.04	0.03	0.003	0.37
0027217	Drill Core	1.24	5	<0.001	0.001	<0.02	0.03	<2	0.002	<0.001	0.05	3.10	<0.02	<0.01	<0.001	<0.01	<0.01	0.03	0.02	0.003	0.25
0027218	Drill Core	2.18	3	<0.001	0.002	<0.02	0.01	<2	0.002	<0.001	0.02	2.19	<0.02	<0.01	<0.001	<0.01	<0.01	0.03	0.02	0.002	0.27
0027219	Drill Core	0.78	5	<0.001	<0.001	<0.02	<0.01	<2	0.001	<0.001	0.11	3.54	<0.02	<0.01	<0.001	<0.01	<0.01	2.60	0.02	<0.001	1.13
0027220	Drill Core	3.33	13	0.002	0.007	0.03	0.03	<2	0.003	0.002	0.05	4.08	<0.02	<0.01	<0.001	<0.01	<0.01	1.28	0.04	0.003	0.85



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **Bul River Mineral Corporation**

Box 845

Cranbrook British Columbia V1C 4J6 Canada

Project: Bul River

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# CERTIFICATE OF ANALYSIS

VAN19002348.1

Method	MA370	MA370	MA370	MA370	MA370	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200
Analyte	Al	Na	K	W	S	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	
Unit	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	
MDL	0.01	0.01	0.01	0.01	0.05	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	
0027191	Drill Core	8.82	0.33	3.69	<0.01	0.20	1.7	39.3	283.0	397	0.3	20.7	8.5	47	3.10	2.0	<0.5	8.4	7	2.8	0.6
0027192	Drill Core	9.00	0.40	3.82	<0.01	0.07	1.8	10.2	175.7	394	0.3	11.7	4.8	48	2.33	1.6	<0.5	9.2	10	4.7	0.5
0027193	Drill Core	8.78	0.52	3.72	<0.01	0.59	1.9	52.5	145.4	263	0.3	16.8	8.5	23	1.90	3.5	0.6	8.7	7	1.4	1.7
0027194	Drill Core	8.22	0.72	3.58	<0.01	1.85	4.2	78.2	173.1	506	0.4	31.3	29.9	405	4.01	10.8	1.2	6.2	13	3.1	3.0
0027195	Drill Core	7.76	0.40	3.52	<0.01	<0.05	2.7	42.4	144.1	186	0.2	13.8	5.6	83	2.99	2.0	2.2	10.3	8	0.3	1.4
0027196	Drill Core	8.25	0.59	3.74	<0.01	<0.05	3.8	52.6	110.5	201	0.2	19.5	7.3	152	2.69	2.3	3.2	10.4	3	0.7	0.8
0027197	Drill Core	9.94	0.35	4.79	<0.01	<0.05	7.4	58.2	159.8	134	0.2	10.7	6.0	92	3.58	31.2	2.5	13.9	7	<0.1	1.4
0027198	Drill Core	10.05	0.27	4.49	<0.01	0.74	9.7	142.5	142.1	257	0.3	54.8	36.8	296	3.85	16.5	3.3	10.7	9	0.6	2.2
0027199	Drill Core	10.54	0.38	5.01	<0.01	0.16	6.7	39.0	36.8	139	<0.1	17.4	14.5	329	1.92	25.3	2.0	15.2	7	1.3	0.8
0027200	Rock Pulp	6.84	3.12	1.48	<0.01	0.05	3.8	21.2	0.9	32	<0.1	6.6	4.2	596	2.47	1.2	1.1	2.3	32	<0.1	0.1
0027201	Drill Core	5.11	0.80	2.10	<0.01	<0.05	2.0	2.8	9.7	54	<0.1	8.7	3.4	698	2.89	2.1	<0.5	7.4	61	0.3	3.9
0027202	Drill Core	9.63	0.36	4.46	<0.01	1.05	5.0	101.4	64.3	182	0.8	46.3	32.4	370	3.33	29.3	<0.5	12.3	9	0.8	1.6
0027203	Drill Core	6.78	0.07	3.46	<0.01	<0.05	0.7	23.0	313.9	714	0.2	14.0	7.5	667	2.31	4.3	<0.5	10.1	3	4.1	0.8
0027204	Drill Core	0.09	<0.01	<0.01	<0.01	10.54	0.2	88.5	>10000	>10000	>100	5.3	10.5	351	1.92	6.8	31.2	0.4	4	143.0	722.5
0027205	Drill Core	6.60	0.06	3.08	<0.01	0.48	3.2	44.7	>10000	3339	33.4	17.2	14.7	1068	4.46	7.8	1.4	7.0	4	10.0	9.2
0027206	Drill Core	7.28	0.07	3.61	<0.01	<0.05	7.4	74.4	797.6	834	0.7	26.0	15.0	552	3.40	3.5	5.0	9.7	3	4.0	1.6
0027207	Drill Core	9.13	0.08	4.51	<0.01	0.14	0.4	27.1	55.4	123	0.2	19.9	10.7	570	2.90	6.8	1.3	12.2	4	0.8	0.9
0027208	Drill Core	8.73	0.08	4.33	<0.01	<0.05	0.4	22.7	138.7	190	0.2	12.8	6.8	710	2.93	2.7	0.9	11.9	5	0.8	0.7
0027209	Drill Core	7.63	0.07	3.77	<0.01	0.56	0.3	12.5	52.0	158	<0.1	20.9	9.7	785	3.52	19.0	2.4	10.1	14	1.2	3.9
0027210	Rock Pulp	1.24	0.07	0.15	<0.01	22.06	8.6	>10000	2445.7	>10000	66.9	54.4	283.3	558	27.15	175.7	361.4	1.0	3	105.6	7.0
0027211	Drill Core	8.25	0.07	4.15	<0.01	<0.05	0.7	22.0	187.5	203	0.3	12.0	4.0	226	2.74	5.2	<0.5	10.2	5	0.2	0.9
0027212	Drill Core	7.00	0.07	3.69	<0.01	<0.05	8.3	33.3	253.3	302	0.3	18.5	5.1	173	3.02	4.8	1.3	9.3	3	0.2	0.9
0027213	Drill Core	7.55	0.08	3.47	<0.01	<0.05	2.4	130.5	357.7	614	0.3	34.9	19.0	821	4.09	3.5	2.3	10.4	9	2.7	1.5
0027214	Drill Core	7.78	0.15	3.80	<0.01	<0.05	8.1	49.2	177.0	426	0.3	20.8	10.9	368	2.87	3.1	2.6	11.2	3	1.2	1.1
0027215	Drill Core	7.88	0.07	3.92	<0.01	<0.05	0.9	10.1	47.1	549	0.1	14.9	6.3	700	1.22	2.9	0.7	14.3	3	4.0	2.0
0027216	Drill Core	8.28	0.08	4.06	<0.01	<0.05	0.9	19.9	76.5	564	<0.1	14.6	14.5	998	2.82	3.7	1.2	12.9	6	3.9	1.1
0027217	Drill Core	6.04	0.06	3.00	<0.01	<0.05	1.1	12.2	12.9	257	<0.1	17.6	2.9	527	2.73	2.8	1.2	9.5	3	1.5	1.4
0027218	Drill Core	7.12	0.07	3.60	<0.01	<0.05	0.8	7.5	13.4	127	<0.1	12.7	3.4	239	1.69	6.7	1.5	10.1	2	0.6	0.5
0027219	Drill Core	3.77	0.04	1.82	<0.01	0.08	0.3	3.4	82.4	17	0.1	9.1	3.6	1075	3.20	4.7	0.8	4.8	77	<0.1	1.6
0027220	Drill Core	7.04	0.07	3.47	<0.01	1.66	14.3	75.4	303.9	261	0.8	27.7	21.0	490	3.74	10.3	2.1	7.2	39	1.6	1.3



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **Bul River Mineral Corporation**

Box 845

Cranbrook British Columbia V1C 4J6 Canada

Project: Bul River

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# CERTIFICATE OF ANALYSIS

## VAN19002348.1

Method	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	
Analyte	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	
Unit	ppm	ppm	%	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	
MDL	0.1	1	0.01	0.001	1	1	0.01	1	0.001	20	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	1	0.5	
0027191	Drill Core	1.0	6	0.10	0.053	18	5	0.14	30	<0.001	<20	0.79	0.010	0.24	<0.1	0.08	2.2	0.1	0.21	2	<0.5
0027192	Drill Core	0.9	6	0.18	0.059	12	6	0.17	37	<0.001	<20	0.83	0.012	0.30	<0.1	0.06	2.0	<0.1	0.08	2	<0.5
0027193	Drill Core	1.2	4	0.08	0.058	30	4	0.06	33	<0.001	<20	0.49	0.011	0.24	<0.1	0.09	1.6	<0.1	0.62	1	<0.5
0027194	Drill Core	1.4	3	0.32	0.042	17	4	0.13	71	<0.001	<20	0.47	0.011	0.25	<0.1	0.05	2.3	<0.1	1.80	<1	<0.5
0027195	Drill Core	1.5	3	0.02	0.036	38	3	0.02	73	<0.001	<20	0.36	0.008	0.22	<0.1	0.05	1.6	<0.1	<0.05	1	<0.5
0027196	Drill Core	1.1	3	0.02	0.032	40	2	0.02	29	<0.001	<20	0.45	0.008	0.25	<0.1	0.04	2.1	<0.1	<0.05	1	<0.5
0027197	Drill Core	1.5	2	0.02	0.034	47	2	0.01	24	<0.001	<20	0.36	0.004	0.22	<0.1	0.04	1.7	<0.1	<0.05	<1	<0.5
0027198	Drill Core	1.2	4	0.13	0.035	21	3	0.09	31	<0.001	<20	0.51	0.007	0.25	<0.1	0.06	1.7	<0.1	0.72	1	<0.5
0027199	Drill Core	0.4	3	0.12	0.033	38	2	0.09	31	<0.001	<20	0.38	0.005	0.23	<0.1	0.03	1.7	<0.1	0.17	1	<0.5
0027200	Rock Pulp	<0.1	23	0.79	0.037	5	15	0.50	56	0.080	<20	1.04	0.068	0.08	0.3	<0.01	2.7	<0.1	0.05	4	<0.5
0027201	Drill Core	0.1	3	2.56	0.023	30	2	0.97	23	<0.001	<20	0.29	0.014	0.22	<0.1	<0.01	2.2	<0.1	<0.05	<1	<0.5
0027202	Drill Core	1.1	3	0.19	0.030	31	3	0.08	30	<0.001	<20	0.38	0.006	0.22	1.9	0.03	1.5	0.1	1.08	1	<0.5
0027203	Drill Core	0.1	3	0.03	0.022	32	2	0.05	28	<0.001	<20	0.40	0.005	0.27	<0.1	0.06	1.8	<0.1	<0.05	<1	<0.5
0027204	Drill Core	192.5	<1	<0.01	0.002	1	<1	<0.01	2	<0.001	<20	0.08	0.003	<0.01	<0.1	18.90	0.3	1.3	>10	<1	62.5
0027205	Drill Core	11.8	4	0.03	0.024	14	3	0.03	24	<0.001	<20	0.44	0.006	0.24	<0.1	1.28	2.7	0.2	0.51	1	3.2
0027206	Drill Core	1.2	3	0.02	0.033	30	2	0.02	21	<0.001	<20	0.27	0.005	0.21	0.1	0.16	2.2	<0.1	<0.05	<1	<0.5
0027207	Drill Core	0.5	4	0.05	0.026	26	2	0.06	29	<0.001	<20	0.46	0.006	0.27	<0.1	0.07	1.8	<0.1	0.13	<1	<0.5
0027208	Drill Core	0.2	3	0.05	0.031	29	2	0.08	23	<0.001	<20	0.33	0.005	0.23	<0.1	0.07	1.8	<0.1	<0.05	<1	<0.5
0027209	Drill Core	0.4	3	0.48	0.028	17	2	0.20	27	<0.001	<20	0.41	0.005	0.26	<0.1	0.04	2.0	<0.1	0.56	<1	<0.5
0027210	Rock Pulp	103.6	7	0.56	0.010	4	18	1.03	6	0.008	<20	0.84	0.004	0.05	1.5	4.17	1.2	4.6	>10	10	52.1
0027211	Drill Core	0.9	3	0.03	0.033	27	2	0.02	20	<0.001	<20	0.26	0.004	0.20	<0.1	0.04	2.2	<0.1	<0.05	<1	<0.5
0027212	Drill Core	1.1	3	0.01	0.033	29	3	0.01	27	0.001	<20	0.34	0.004	0.25	<0.1	0.03	2.2	<0.1	<0.05	1	<0.5
0027213	Drill Core	1.5	4	0.05	0.051	32	3	0.03	29	<0.001	<20	0.45	0.006	0.21	<0.1	0.09	2.2	<0.1	<0.05	1	<0.5
0027214	Drill Core	1.0	3	0.02	0.040	42	2	0.02	27	<0.001	<20	0.44	0.005	0.26	<0.1	0.04	2.0	<0.1	<0.05	1	<0.5
0027215	Drill Core	0.3	2	0.02	0.022	49	1	0.02	28	<0.001	<20	0.38	0.005	0.25	<0.1	0.01	1.2	<0.1	<0.05	1	<0.5
0027216	Drill Core	0.3	3	0.04	0.029	39	2	0.03	27	<0.001	<20	0.38	0.006	0.21	<0.1	0.03	2.0	<0.1	<0.05	<1	<0.5
0027217	Drill Core	<0.1	3	0.02	0.021	31	2	0.03	25	<0.001	<20	0.28	0.004	0.21	<0.1	0.01	2.1	<0.1	<0.05	<1	<0.5
0027218	Drill Core	<0.1	2	0.02	0.018	31	2	0.02	21	<0.001	<20	0.23	0.004	0.19	<0.1	<0.01	1.4	<0.1	<0.05	<1	<0.5
0027219	Drill Core	0.2	2	2.58	0.015	12	2	0.99	14	<0.001	<20	0.23	0.005	0.15	<0.1	0.02	1.4	<0.1	0.08	<1	<0.5
0027220	Drill Core	2.1	3	1.34	0.036	9	2	0.60	22	<0.001	<20	0.33	0.004	0.22	<0.1	0.06	2.2	<0.1	1.63	<1	<0.5



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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:** **Bul River Mineral Corporation**

Box 845

Cranbrook British Columbia V1C 4J6 Canada

Project: Bul River

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# CERTIFICATE OF ANALYSIS

VAN19002348.1

Method	AQ200
Analyte	Te
Unit	ppm
MDL	0.2
0027191	Drill Core <0.2
0027192	Drill Core <0.2
0027193	Drill Core <0.2
0027194	Drill Core 0.2
0027195	Drill Core <0.2
0027196	Drill Core <0.2
0027197	Drill Core <0.2
0027198	Drill Core <0.2
0027199	Drill Core <0.2
0027200	Rock Pulp <0.2
0027201	Drill Core <0.2
0027202	Drill Core <0.2
0027203	Drill Core <0.2
0027204	Drill Core 4.7
0027205	Drill Core 0.5
0027206	Drill Core <0.2
0027207	Drill Core <0.2
0027208	Drill Core <0.2
0027209	Drill Core <0.2
0027210	Rock Pulp 0.3
0027211	Drill Core <0.2
0027212	Drill Core <0.2
0027213	Drill Core <0.2
0027214	Drill Core <0.2
0027215	Drill Core <0.2
0027216	Drill Core <0.2
0027217	Drill Core <0.2
0027218	Drill Core <0.2
0027219	Drill Core <0.2
0027220	Drill Core 0.2



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:** **Bul River Mineral Corporation**

Box 845

Cranbrook British Columbia V1C 4J6 Canada

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# CERTIFICATE OF ANALYSIS

**VAN19002348.1**

Method	WGHT	FA330	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	
Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Sr	Cd	Sb	Bi	Ca	P	Cr	Mg	
Unit	kg	ppb	%	%	%	%	ppm	%	%	%	%	%	%	%	%	%	%	%	%	%	
MDL	0.01	2	0.001	0.001	0.02	0.01	2	0.001	0.001	0.01	0.01	0.02	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01	
0027221	Rock Pulp	0.11	4	<0.001	0.002	<0.02	<0.01	<2	<0.001	<0.001	0.07	2.60	<0.02	0.02	<0.001	<0.01	<0.01	1.52	0.04	0.001	0.51
0027222	Drill Core	2.75	6	<0.001	0.004	0.02	0.03	<2	0.003	<0.001	0.04	2.93	<0.02	<0.01	<0.001	<0.01	<0.01	1.58	0.05	0.004	0.82
0027223	Drill Core	1.93	11	<0.001	0.012	0.02	0.01	<2	0.004	0.002	0.05	4.78	<0.02	<0.01	<0.001	<0.01	<0.01	1.18	0.04	0.004	0.83
0027224	Drill Core	2.81	10	0.003	0.007	<0.02	0.01	<2	0.003	0.002	0.07	4.13	<0.02	<0.01	<0.001	<0.01	<0.01	2.06	0.04	0.004	1.09
0027225	Drill Core	2.74	6	<0.001	0.004	<0.02	0.02	<2	0.002	0.001	0.05	2.90	<0.02	<0.01	<0.001	<0.01	<0.01	1.35	0.05	0.003	0.88
0027226	Drill Core	4.32	3	<0.001	0.002	<0.02	<0.01	<2	0.002	<0.001	0.03	4.38	<0.02	<0.01	<0.001	<0.01	<0.01	0.50	0.05	0.004	1.55
0027227	Rock Pulp	0.11	185	<0.001	0.138	0.05	0.19	13	0.002	0.002	0.06	8.01	0.03	<0.01	0.001	<0.01	<0.01	1.25	0.03	0.007	1.85
0027228	Drill Core	1.90	7	<0.001	0.013	<0.02	<0.01	<2	0.004	0.002	0.34	9.06	<0.02	<0.01	<0.001	<0.01	<0.01	3.39	0.01	0.001	1.89
0027229	Drill Core	2.95	5	<0.001	0.007	<0.02	<0.01	<2	0.003	<0.001	0.16	8.68	<0.02	<0.01	<0.001	<0.01	<0.01	0.49	0.05	0.004	1.65
0027230	Drill Core	2.39	4	<0.001	0.006	<0.02	<0.01	<2	0.003	<0.001	0.10	7.31	<0.02	<0.01	<0.001	<0.01	<0.01	0.40	0.06	0.004	1.46
0027231	Drill Core	3.39	5	<0.001	0.005	<0.02	<0.01	<2	0.002	<0.001	0.03	6.11	<0.02	<0.01	<0.001	<0.01	<0.01	0.15	0.06	0.004	1.44
0027232	Drill Core	5.65	5	<0.001	0.007	<0.02	<0.01	<2	0.003	0.003	0.03	5.69	0.03	<0.01	<0.001	<0.01	<0.01	0.15	0.07	0.004	1.41
0027233	Drill Core	3.93	6	<0.001	0.008	<0.02	<0.01	<2	0.003	0.005	0.03	5.64	0.05	<0.01	<0.001	<0.01	<0.01	0.18	0.06	0.005	1.51



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:** **Bul River Mineral Corporation**

Box 845

Cranbrook British Columbia V1C 4J6 Canada

Project: Bul River

Report Date: September 12, 2019

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# CERTIFICATE OF ANALYSIS

**VAN19002348.1**

Method	MA370	MA370	MA370	MA370	MA370	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200
Analyte	Al	Na	K	W	S	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	
Unit	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	
MDL	0.01	0.01	0.01	0.01	0.05	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	
0027221	Rock Pulp	5.73	3.20	1.47	<0.01	0.06	3.4	21.4	0.9	30	<0.1	7.3	4.2	563	2.42	1.2	2.1	2.1	30	<0.1	<0.1
0027222	Drill Core	7.59	0.08	3.46	<0.01	0.47	1.0	33.9	223.8	305	0.4	23.0	9.9	421	2.51	2.3	0.5	7.5	52	2.0	0.9
0027223	Drill Core	7.17	0.07	3.64	<0.01	2.27	6.4	120.9	197.5	124	0.6	34.8	24.0	498	4.25	7.9	1.6	7.8	35	0.7	2.4
0027224	Drill Core	6.67	0.07	3.26	<0.01	1.31	26.8	69.2	197.5	130	0.4	25.3	17.5	699	3.68	5.0	1.3	6.7	64	0.9	1.4
0027225	Drill Core	7.57	0.08	3.79	<0.01	0.53	3.8	37.1	186.1	158	0.4	15.9	12.2	504	2.51	5.2	<0.5	7.6	43	1.3	0.6
0027226	Drill Core	7.61	0.04	3.47	<0.01	0.57	1.2	22.8	2.6	47	<0.1	19.1	8.6	311	3.76	21.1	1.7	7.2	21	<0.1	0.5
0027227	Rock Pulp	5.32	0.13	1.24	<0.01	4.10	3.0	1365.2	527.0	1849	13.0	19.2	23.7	654	7.75	297.8	209.2	1.2	31	13.1	17.3
0027228	Drill Core	2.10	0.01	0.55	<0.01	2.13	1.1	126.6	8.0	36	<0.1	42.0	24.2	3248	8.71	56.5	1.0	1.8	88	<0.1	2.4
0027229	Drill Core	6.13	0.03	2.14	<0.01	1.22	1.1	68.3	2.3	68	<0.1	27.7	9.0	1680	8.66	27.1	<0.5	6.0	16	<0.1	0.5
0027230	Drill Core	7.17	0.04	2.87	<0.01	1.21	0.7	73.3	2.3	67	<0.1	26.1	9.9	957	6.49	34.4	<0.5	6.4	12	<0.1	0.5
0027231	Drill Core	8.22	0.05	3.38	<0.01	1.06	1.3	51.1	2.0	58	<0.1	22.6	9.4	266	4.94	69.7	<0.5	6.6	5	<0.1	0.6
0027232	Drill Core	8.02	0.05	3.40	<0.01	1.18	2.0	77.5	3.5	53	<0.1	27.4	32.5	237	4.88	438.6	<0.5	7.5	5	<0.1	1.1
0027233	Drill Core	7.70	0.05	3.28	<0.01	1.16	1.7	90.6	4.8	56	<0.1	31.6	49.1	276	5.03	709.5	<0.5	8.1	7	<0.1	1.5



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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:** **Bul River Mineral Corporation**

Box 845  
Cranbrook British Columbia V1C 4J6 Canada

Project: Bul River

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# CERTIFICATE OF ANALYSIS

VAN19002348.1

Method	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	
Analyte	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	
Unit	ppm	ppm	%	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	
MDL	0.1	1	0.01	0.001	1	1	0.01	1	0.001	20	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	1	0.5	
0027221	Rock Pulp	<0.1	22	0.77	0.037	5	15	0.50	54	0.075	<20	1.02	0.063	0.07	0.2	<0.01	2.5	<0.1	0.05	4	<0.5
0027222	Drill Core	1.0	5	1.62	0.045	11	4	0.53	25	<0.001	<20	0.55	0.008	0.26	<0.1	0.06	2.1	<0.1	0.46	1	<0.5
0027223	Drill Core	1.3	3	1.21	0.037	8	2	0.54	22	<0.001	<20	0.28	0.004	0.22	<0.1	0.02	1.8	<0.1	2.19	<1	0.6
0027224	Drill Core	0.9	3	2.10	0.039	9	2	0.84	25	<0.001	<20	0.33	0.005	0.24	<0.1	0.02	2.1	<0.1	1.27	<1	0.5
0027225	Drill Core	0.8	3	1.42	0.044	13	2	0.60	23	<0.001	<20	0.29	0.003	0.22	<0.1	0.04	1.9	<0.1	0.52	<1	<0.5
0027226	Drill Core	0.3	10	0.50	0.050	12	13	1.13	31	0.002	<20	1.88	0.004	0.33	<0.1	<0.01	1.6	<0.1	0.57	4	<0.5
0027227	Rock Pulp	8.0	28	1.21	0.025	4	40	1.63	85	0.004	<20	1.82	0.009	0.17	2.8	2.11	4.6	2.4	3.94	5	24.5
0027228	Drill Core	1.4	9	3.28	0.011	3	8	1.73	16	0.002	<20	1.16	0.003	0.08	<0.1	0.06	1.9	0.1	2.10	3	0.9
0027229	Drill Core	0.4	20	0.50	0.049	11	17	1.44	27	0.003	<20	2.46	0.004	0.24	<0.1	0.03	3.1	<0.1	1.24	6	<0.5
0027230	Drill Core	0.4	16	0.40	0.053	11	14	1.16	25	0.003	<20	2.16	0.003	0.26	<0.1	0.02	2.6	<0.1	1.18	6	<0.5
0027231	Drill Core	0.4	13	0.14	0.052	13	14	1.00	30	0.002	<20	2.06	0.003	0.33	<0.1	<0.01	1.9	0.1	1.01	5	<0.5
0027232	Drill Core	0.5	11	0.14	0.055	10	12	0.95	26	0.002	<20	1.79	0.003	0.25	<0.1	0.05	1.5	<0.1	1.12	4	<0.5
0027233	Drill Core	0.6	12	0.18	0.053	10	13	1.08	28	0.002	<20	1.95	0.004	0.29	<0.1	0.02	1.5	<0.1	1.17	5	<0.5



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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:** **Bul River Mineral Corporation**

Box 845

Cranbrook British Columbia V1C 4J6 Canada

Project: Bul River

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## CERTIFICATE OF ANALYSIS

VAN19002348.1

Method	AQ200
Analyte	Te
Unit	ppm
MDL	0.2
0027221	Rock Pulp <0.2
0027222	Drill Core <0.2
0027223	Drill Core 0.2
0027224	Drill Core <0.2
0027225	Drill Core <0.2
0027226	Drill Core <0.2
0027227	Rock Pulp 0.2
0027228	Drill Core <0.2
0027229	Drill Core <0.2
0027230	Drill Core <0.2
0027231	Drill Core <0.2
0027232	Drill Core <0.2
0027233	Drill Core 0.2





Bureau Veritas Commodities Canada Ltd.  
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada  
PHONE (604) 253-3158

Project: Bul River  
Report Date: September 12, 2019

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# QUALITY CONTROL REPORT

VAN19002348.1

Method	WGHT	FA330	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	
Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Sr	Cd	Sb	Bi	Ca	P	Cr	Mg	
Unit	kg	ppb	%	%	%	%	ppm	%	%	%	%	%	%	%	%	%	%	%	%	%	
MDL	0.01	2	0.001	0.001	0.02	0.01	2	0.001	0.001	0.01	0.01	0.02	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01	
Pulp Duplicates																					
0027161	Drill Core	3.10	7	<0.001	0.004	<0.02	0.01	<2	0.002	<0.001	0.01	2.91	<0.02	<0.01	<0.001	<0.01	<0.01	0.03	0.04	0.003	0.32
REP 0027161	QC	7																			
0027163	Drill Core	2.16	7	<0.001	0.007	<0.02	0.01	<2	0.002	0.001	0.01	2.63	<0.02	<0.01	<0.001	<0.01	<0.01	0.07	0.04	0.003	0.31
REP 0027163	QC	<0.001 0.008 <0.02 0.01 <2 0.002 0.001 0.01 2.68 <0.02 <0.01 <0.001 <0.01 <0.01 0.07 0.04 0.003 0.31																			
0027168	Drill Core	1.63	9	<0.001	0.014	0.04	0.02	<2	0.003	<0.001	<0.01	4.14	<0.02	<0.01	<0.001	<0.01	<0.01	0.03	0.05	0.003	0.29
REP 0027168	QC																				
0027170	Rock Pulp	0.11	188	<0.001	0.141	0.05	0.19	11	0.002	0.002	0.07	7.88	0.03	<0.01	<0.001	<0.01	<0.01	1.27	0.03	0.006	1.91
REP 0027170	QC	177																			
0027197	Drill Core	2.45	9	<0.001	0.006	<0.02	0.01	<2	0.001	<0.001	<0.01	4.29	<0.02	<0.01	<0.001	<0.01	<0.01	0.03	0.04	0.005	0.40
REP 0027197	QC	<0.001 0.006 <0.02 0.01 <2 0.001 <0.001 <0.01 4.22 <0.02 <0.01 <0.001 <0.01 <0.01 0.03 0.04 0.005 0.39																			
0027202	Drill Core	0.80	8	<0.001	0.009	<0.02	0.02	<2	0.005	0.003	0.03	3.72	<0.02	<0.01	<0.001	<0.01	<0.01	0.17	0.03	0.005	0.46
REP 0027202	QC																				
0027205	Drill Core	0.42	10	<0.001	0.004	3.47	0.33	35	0.002	0.001	0.10	4.77	<0.02	<0.01	0.001	<0.01	<0.01	0.03	0.03	0.001	0.29
REP 0027205	QC	8																			
0027230	Drill Core	2.39	4	<0.001	0.006	<0.02	<0.01	<2	0.003	<0.001	0.10	7.31	<0.02	<0.01	<0.001	<0.01	<0.01	0.40	0.06	0.004	1.46
REP 0027230	QC	<0.001 0.007 <0.02 <0.01 <2 0.003 <0.001 0.10 7.48 <0.02 <0.01 <0.001 <0.01 <0.01 0.41 0.06 0.004 1.50																			
0027231	Drill Core	3.39	5	<0.001	0.005	<0.02	<0.01	<2	0.002	<0.001	0.03	6.11	<0.02	<0.01	<0.001	<0.01	<0.01	0.15	0.06	0.004	1.44
REP 0027231	QC	4																			
Core Reject Duplicates																					
0027214	Drill Core	2.21	7	<0.001	0.005	0.02	0.05	<2	0.002	0.001	0.04	3.40	<0.02	<0.01	<0.001	<0.01	<0.01	0.02	0.04	0.004	0.34
DUP 0027214	QC	8 <0.001 0.005 <0.02 0.05 <2 0.002 0.001 0.04 3.30 <0.02 <0.01 <0.001 <0.01 <0.01 0.02 0.04 0.003 0.33																			
Reference Materials																					
STD BVGEO01	Standard																				
STD CDN-ME-14	Standard	0.002 1.251 0.51 3.26 44 0.002 0.018 0.09 18.39 <0.02 <0.01 0.008 <0.01 0.01 0.76 0.02 0.002 1.34																			
STD CDN-ME-9	Standard	<0.001 0.655 <0.02 0.01 4 0.899 0.017 0.12 13.81 <0.02 0.03 <0.001 <0.01 <0.01 4.28 0.06 0.030 4.06																			
STD CDN-ME-14	Standard	0.002 1.198 0.47 3.09 43 0.002 0.017 0.09 17.88 <0.02 <0.01 0.009 <0.01 <0.01 0.77 0.02 0.001 1.31																			
STD CDN-ME-9	Standard	<0.001 0.632 <0.02 0.01 3 0.910 0.017 0.12 13.68 <0.02 0.03 <0.001 <0.01 <0.01 4.13 0.06 0.030 4.04																			
STD CDN-ME-14	Standard	0.002 1.224 0.48 3.08 44 0.002 0.017 0.09 17.54 <0.02 <0.01 0.009 <0.01 0.01 0.74 0.02 0.002 1.27																			



Bureau Veritas Commodities Canada Ltd.  
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada  
PHONE (604) 253-3158

**Client:** Bul River Mineral Corporation  
Box 845  
Cranbrook British Columbia V1C 4J6 Canada

**Project:** Bul River  
**Report Date:** September 12, 2019

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# QUALITY CONTROL REPORT

VAN19002348.1

Method	Analyte	MA370	MA370	MA370	MA370	MA370	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200
		Al	Na	K	W	S	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb
Unit		%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm
MDL		0.01	0.01	0.01	0.01	0.05	0.1	0.1	0.1	1	0.1	0.1	0.1	0.1	0.01	0.5	0.5	0.1	1	0.1	0.1
Pulp Duplicates																					
0027161	Drill Core	8.62	0.67	3.73	<0.01	<0.05	1.6	43.8	149.4	99	0.3	14.5	4.9	116	2.34	1.8	2.4	10.3	4	0.3	1.7
REP 0027161	QC																				
0027163	Drill Core	8.71	0.45	3.18	<0.01	<0.05	2.7	73.8	119.6	99	0.2	11.5	12.3	115	2.16	2.3	3.1	7.1	10	0.2	3.8
REP 0027163	QC	8.74	0.45	3.18	<0.01	<0.05															
0027168	Drill Core	9.04	0.24	3.49	<0.01	<0.05	2.1	137.2	337.2	188	0.2	25.6	5.6	52	3.58	1.3	1.8	9.0	7	0.7	2.3
REP 0027168	QC						2.1	139.2	339.0	195	0.2	25.1	5.8	53	3.60	1.6	1.5	9.2	6	0.7	2.2
0027170	Rock Pulp	5.81	0.14	1.26	<0.01	3.99	3.2	1318.6	516.7	1821	11.8	20.4	22.9	657	7.49	290.7	144.8	0.3	28	12.9	22.7
REP 0027170	QC																				
0027197	Drill Core	9.94	0.35	4.79	<0.01	<0.05	7.4	58.2	159.8	134	0.2	10.7	6.0	92	3.58	31.2	2.5	13.9	7	<0.1	1.4
REP 0027197	QC	9.86	0.35	4.70	<0.01	<0.05															
0027202	Drill Core	9.63	0.36	4.46	<0.01	1.05	5.0	101.4	64.3	182	0.8	46.3	32.4	370	3.33	29.3	<0.5	12.3	9	0.8	1.6
REP 0027202	QC						5.5	96.1	60.9	178	0.6	43.9	32.6	375	3.31	26.6	<0.5	12.0	8	1.1	1.5
0027205	Drill Core	6.60	0.06	3.08	<0.01	0.48	3.2	44.7	>10000	3339	33.4	17.2	14.7	1068	4.46	7.8	1.4	7.0	4	10.0	9.2
REP 0027205	QC																				
0027230	Drill Core	7.17	0.04	2.87	<0.01	1.21	0.7	73.3	2.3	67	<0.1	26.1	9.9	957	6.49	34.4	<0.5	6.4	12	<0.1	0.5
REP 0027230	QC	7.34	0.04	2.91	<0.01	1.21															
0027231	Drill Core	8.22	0.05	3.38	<0.01	1.06	1.3	51.1	2.0	58	<0.1	22.6	9.4	266	4.94	69.7	<0.5	6.6	5	<0.1	0.6
REP 0027231	QC																				
Core Reject Duplicates																					
0027214	Drill Core	7.78	0.15	3.80	<0.01	<0.05	8.1	49.2	177.0	426	0.3	20.8	10.9	368	2.87	3.1	2.6	11.2	3	1.2	1.1
DUP 0027214	QC	7.74	0.15	3.73	<0.01	<0.05	8.3	53.1	180.3	428	0.3	22.2	11.4	371	2.85	3.3	2.3	11.3	3	1.4	1.1
Reference Materials																					
STD BVGE001	Standard						9.2	4352.6	187.4	1694	2.5	159.2	25.4	742	3.67	116.9	200.2	14.3	53	5.8	2.6
STD CDN-ME-14	Standard	4.77	0.55	1.73	<0.01	15.25															
STD CDN-ME-9	Standard	7.03	1.93	0.61	<0.01	2.22															
STD CDN-ME-14	Standard	4.55	0.54	1.68	<0.01	15.13															
STD CDN-ME-9	Standard	6.70	1.82	0.62	<0.01	2.43															
STD CDN-ME-14	Standard	4.32	0.50	1.62	<0.01	15.14															



Bureau Veritas Commodities Canada Ltd.  
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada  
PHONE (604) 253-3158

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Method	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200
Analyte	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	
Unit	ppm	ppm	%	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	
MDL	0.1	1	0.01	0.001	1	1	0.01	1	0.001	20	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	
Pulp Duplicates																					
0027161	Drill Core	1.9	4	0.02	0.042	35	3	0.02	33	<0.001	<20	0.45	0.013	0.28	<0.1	0.02	1.9	<0.1	<0.05	<1	<0.5
REP 0027161	QC																				
0027163	Drill Core	1.2	3	0.07	0.039	19	4	0.03	35	<0.001	<20	0.78	0.012	0.23	<0.1	0.05	1.6	<0.1	<0.05	<1	<0.5
REP 0027163	QC																				
0027168	Drill Core	1.1	4	0.04	0.045	34	3	0.02	20	<0.001	<20	0.70	0.007	0.19	<0.1	0.05	3.2	<0.1	<0.05	<1	<0.5
REP 0027168	QC	1.1	4	0.04	0.042	35	3	0.02	21	<0.001	<20	0.69	0.007	0.19	<0.1	0.05	3.2	<0.1	<0.05	<1	<0.5
0027170	Rock Pulp	7.8	26	1.19	0.026	4	40	1.62	108	0.003	<20	1.73	0.010	0.16	1.9	1.85	4.4	2.2	3.86	5	23.9
REP 0027170	QC																				
0027197	Drill Core	1.5	2	0.02	0.034	47	2	0.01	24	<0.001	<20	0.36	0.004	0.22	<0.1	0.04	1.7	<0.1	<0.05	<1	<0.5
REP 0027197	QC																				
0027202	Drill Core	1.1	3	0.19	0.030	31	3	0.08	30	<0.001	<20	0.38	0.006	0.22	1.9	0.03	1.5	0.1	1.08	1	<0.5
REP 0027202	QC	1.1	3	0.19	0.030	29	3	0.08	28	<0.001	<20	0.38	0.007	0.21	1.9	0.05	1.4	<0.1	1.08	1	<0.5
0027205	Drill Core	11.8	4	0.03	0.024	14	3	0.03	24	<0.001	<20	0.44	0.006	0.24	<0.1	1.28	2.7	0.2	0.51	1	3.2
REP 0027205	QC																				
0027230	Drill Core	0.4	16	0.40	0.053	11	14	1.16	25	0.003	<20	2.16	0.003	0.26	<0.1	0.02	2.6	<0.1	1.18	6	<0.5
REP 0027230	QC																				
0027231	Drill Core	0.4	13	0.14	0.052	13	14	1.00	30	0.002	<20	2.06	0.003	0.33	<0.1	<0.01	1.9	0.1	1.01	5	<0.5
REP 0027231	QC																				
Core Reject Duplicates																					
0027214	Drill Core	1.0	3	0.02	0.040	42	2	0.02	27	<0.001	<20	0.44	0.005	0.26	<0.1	0.04	2.0	<0.1	<0.05	1	<0.5
DUP 0027214	QC	1.0	3	0.02	0.037	40	2	0.02	22	<0.001	<20	0.36	0.005	0.21	<0.1	0.03	1.7	<0.1	<0.05	<1	<0.5
Reference Materials																					
STD BVGEO01	Standard	24.1	72	1.28	0.069	27	179	1.28	335	0.239	<20	2.30	0.184	0.89	3.5	0.10	5.6	0.7	0.67	7	5.1
STD CDN-ME-14	Standard																				
STD CDN-ME-9	Standard																				
STD CDN-ME-14	Standard																				
STD CDN-ME-9	Standard																				
STD CDN-ME-14	Standard																				



Bureau Veritas Commodities Canada Ltd.  
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada  
PHONE (604) 253-3158

**Client:** **Bul River Mineral Corporation**  
Box 845  
Cranbrook British Columbia V1C 4J6 Canada

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Method	AQ200	
Analyte	Te	
Unit	ppm	
MDL	0.2	
Pulp Duplicates		
0027161	Drill Core	<0.2
REP 0027161	QC	
0027163	Drill Core	<0.2
REP 0027163	QC	
0027168	Drill Core	<0.2
REP 0027168	QC	<0.2
0027170	Rock Pulp	0.2
REP 0027170	QC	
0027197	Drill Core	<0.2
REP 0027197	QC	
0027202	Drill Core	<0.2
REP 0027202	QC	<0.2
0027205	Drill Core	0.5
REP 0027205	QC	
0027230	Drill Core	<0.2
REP 0027230	QC	
0027231	Drill Core	<0.2
REP 0027231	QC	
Core Reject Duplicates		
0027214	Drill Core	<0.2
DUP 0027214	QC	<0.2
Reference Materials		
STD BVGEO01	Standard	0.8
STD CDN-ME-14	Standard	
STD CDN-ME-9	Standard	
STD CDN-ME-14	Standard	
STD CDN-ME-9	Standard	
STD CDN-ME-14	Standard	



# QUALITY CONTROL REPORT

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	WGHT	FA330	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370
	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Sr	Cd	Sb	Bi	Ca	P	Cr	Mg
	kg	ppb	%	%	%	%	ppm	%	%	%	%	%	%	%	%	%	%	%	%	%
	0.01	2	0.001	0.001	0.02	0.01	2	0.001	0.001	0.01	0.01	0.02	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01
STD DS11	Standard																			
STD DS11	Standard																			
STD DS11	Standard																			
STD OREAS131B	Standard		<0.001	0.022	1.75	3.01	34	0.003	0.002	0.18	5.48	<0.02	<0.01	0.009	<0.01	<0.01	5.08	0.05	0.003	3.16
STD OREAS262	Standard																			
STD OREAS262	Standard																			
STD OREAS262	Standard																			
STD OREAS262	Standard																			
STD OXC152	Standard	225																		
STD OXC152	Standard	218																		
STD OXC152	Standard	217																		
STD OXC152	Standard	218																		
STD OXH139	Standard	1323																		
STD OXH139	Standard	1269																		
STD OXH139	Standard	1324																		
STD OXH139	Standard	1327																		
STD CDN-ME-9 Expected			0.654		0.012		0.93	0.0169	0.121	13.84		0.03				4.21	0.06	0.0284	4.05	
STD CDN-ME-14 Expected			1.221	0.495	3.17	43.5	0.002	0.0172	0.0883	18.04	0.0088		0.0088		0.0094	0.747	0.0147	0.0014	1.28	
STD OREAS131B Expected			0.0003	0.0216	1.86	3.14	33.3	0.0025	0.00181	0.1771	5.705	0.0072	0.0026	0.0089	0.005		5.37	0.0536	0.0027	3.128
STD BVGEO01 Expected																				
STD DS11 Expected																				
STD OREAS262 Expected																				
STD OXC152 Expected		216																		
STD OXH139 Expected		1312																		
BLK	Blank																			
BLK	Blank		<0.001	<0.001	<0.02	<0.01	<2	<0.001	<0.001	<0.01	<0.01	<0.02	<0.01	<0.001	<0.01	<0.01	<0.01	<0.01	<0.001	<0.01
BLK	Blank		<0.001	<0.001	<0.02	<0.01	<2	<0.001	<0.001	<0.01	<0.01	<0.02	<0.01	<0.001	<0.01	<0.01	<0.01	<0.01	<0.001	<0.01
BLK	Blank		<0.001	<0.001	<0.02	<0.01	<2	<0.001	<0.001	<0.01	<0.01	<0.02	<0.01	<0.001	<0.01	<0.01	<0.01	<0.01	<0.001	<0.01
BLK	Blank																			



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:** Bul River Mineral Corporation

Box 845

Cranbrook British Columbia V1C 4J6 Canada

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		MA370	MA370	MA370	MA370	MA370	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	
		Al	Na	K	W	S	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb
		%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm
		0.01	0.01	0.01	0.01	0.05	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1
STD DS11	Standard						14.4	159.4	144.7	342	1.7	83.2	13.8	1043	3.15	46.4	67.0	6.7	65	2.6	8.1
STD DS11	Standard						14.0	148.8	134.9	322	1.5	76.7	13.0	995	3.09	42.1	58.5	7.3	66	2.2	6.9
STD DS11	Standard						15.2	154.4	130.0	344	1.7	77.3	12.9	1044	3.13	39.5	113.8	7.5	70	2.6	7.0
STD OREAS131B	Standard	4.45	0.14	3.35	<0.01	4.70															
STD OREAS262	Standard						0.7	128.8	60.3	154	0.5	67.9	29.3	556	3.32	37.8	79.1	7.6	36	0.7	4.1
STD OREAS262	Standard						0.6	117.5	55.9	156	0.4	65.8	27.4	529	3.31	36.6	61.0	9.3	36	0.6	3.2
STD OREAS262	Standard						0.6	118.8	55.2	147	0.5	65.4	26.9	537	3.28	34.4	56.2	9.6	37	0.6	2.8
STD OREAS262	Standard						0.6	118.6	52.5	147	0.4	63.2	26.6	530	3.27	34.0	55.0	9.1	34	0.6	2.7
STD OXC152	Standard																				
STD OXC152	Standard																				
STD OXC152	Standard																				
STD OXC152	Standard																				
STD OXH139	Standard																				
STD OXH139	Standard																				
STD OXH139	Standard																				
STD OXH139	Standard																				
STD CDN-ME-9 Expected		6.74	1.86	0.616		2.58															
STD CDN-ME-14 Expected		4.47	0.53	1.7		16.14															
STD OREAS131B Expected		4.57	0.139	3.34		5.01															
STD BVGEO01 Expected							10.8	4415	187	1741	2.53	163	25	733	3.7	121	219	14.4	55	6.5	2.2
STD DS11 Expected							13.9	149	138	345	1.71	77.7	14.2	1055	3.1	42.8	79	7.65	67.3	2.37	7.2
STD OREAS262 Expected							0.68	118	56	154	0.45	62	26.9	530	3.284	35.8	65	9.33	36	0.61	3.39
STD OXC152 Expected																					
STD OXH139 Expected																					
BLK	Blank						<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	0.2	<1	<0.1	<0.1
BLK	Blank	<0.01	<0.01	<0.01	<0.01	<0.05															
BLK	Blank	<0.01	<0.01	<0.01	<0.01	<0.05															
BLK	Blank	<0.01	<0.01	<0.01	<0.01	<0.05															
BLK	Blank						<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1



Bureau Veritas Commodities Canada Ltd.  
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada  
PHONE (604) 253-3158

**Client:** **Bul River Mineral Corporation**  
Box 845  
Cranbrook British Columbia V1C 4J6 Canada

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		AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200
		Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se
		ppm	ppm	%	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm
		0.1	1	0.01	0.001	1	1	0.01	1	0.001	20	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5
STD DS11	Standard	11.9	49	1.06	0.075	19	60	0.85	416	0.093	<20	1.20	0.075	0.41	3.2	0.29	3.1	5.0	0.28	5	2.1
STD DS11	Standard	10.8	45	1.02	0.066	16	56	0.82	362	0.088	<20	1.12	0.069	0.38	2.6	0.26	3.1	4.7	0.26	5	2.1
STD DS11	Standard	11.8	50	1.08	0.073	19	61	0.85	438	0.094	<20	1.21	0.076	0.41	2.3	0.31	3.2	5.0	0.30	5	2.0
STD OREAS131B	Standard																				
STD OREAS262	Standard	1.1	21	3.03	0.041	16	44	1.20	255	0.003	<20	1.29	0.072	0.30	0.1	0.17	3.1	0.5	0.26	4	<0.5
STD OREAS262	Standard	1.0	21	3.03	0.039	16	42	1.15	244	0.003	<20	1.20	0.069	0.29	0.1	0.18	3.0	0.5	0.25	4	<0.5
STD OREAS262	Standard	1.1	22	2.95	0.038	16	42	1.18	234	0.003	<20	1.32	0.070	0.31	<0.1	0.16	3.2	0.4	0.26	4	<0.5
STD OREAS262	Standard	1.0	22	2.96	0.039	17	44	1.20	251	0.003	<20	1.35	0.069	0.33	<0.1	0.16	3.4	0.5	0.27	4	<0.5
STD OXC152	Standard																				
STD OXC152	Standard																				
STD OXC152	Standard																				
STD OXC152	Standard																				
STD OXH139	Standard																				
STD OXH139	Standard																				
STD OXH139	Standard																				
STD OXH139	Standard																				
STD CDN-ME-9 Expected																					
STD CDN-ME-14 Expected																					
STD OREAS131B Expected																					
STD BVGEO01 Expected		25.6	73	1.3219	0.0727	25.9	171	1.2963	340	0.233		2.347	0.1924	0.89	3.5	0.1	5.97	0.62	0.6655	7.37	4.84
STD DS11 Expected		12.2	50	1.063	0.0701	18.6	61.5	0.85	417	0.0976		1.129	0.0694	0.4	2.9	0.26	3.1	4.9	0.2835	4.7	2.2
STD OREAS262 Expected		1.03	22.5	2.98	0.04	15.9	41.7	1.17	248	0.003		1.204	0.071	0.312	0.13	0.17	3.24	0.47	0.253	3.73	0.4
STD OXC152 Expected																					
STD OXH139 Expected																					
BLK	Blank	<0.1	<1	<0.01	<0.001	<1	<1	<0.01	<1	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank	<0.1	<1	<0.01	<0.001	<1	<1	<0.01	<1	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5



Bureau Veritas Commodities Canada Ltd.  
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada  
PHONE (604) 253-3158

**Client:** **Bul River Mineral Corporation**  
Box 845  
Cranbrook British Columbia V1C 4J6 Canada

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		AQ200 Te ppm 0.2
STD DS11	Standard	4.7
STD DS11	Standard	4.4
STD DS11	Standard	4.9
STD OREAS131B	Standard	
STD OREAS262	Standard	0.2
STD OREAS262	Standard	0.3
STD OREAS262	Standard	<0.2
STD OREAS262	Standard	0.2
STD OXC152	Standard	
STD OXC152	Standard	
STD OXC152	Standard	
STD OXC152	Standard	
STD OXH139	Standard	
STD OXH139	Standard	
STD OXH139	Standard	
STD OXH139	Standard	
STD CDN-ME-9 Expected		
STD CDN-ME-14 Expected		
STD OREAS131B Expected		
STD BVGE001 Expected		1.02
STD DS11 Expected		4.56
STD OREAS262 Expected		0.23
STD OXC152 Expected		
STD OXH139 Expected		
BLK	Blank	<0.2
BLK	Blank	
BLK	Blank	
BLK	Blank	
BLK	Blank	<0.2





Bureau Veritas Commodities Canada Ltd.  
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada  
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Project: Bul River  
Report Date: September 12, 2019

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# QUALITY CONTROL REPORT

VAN19002348.1

		WGHT	FA330	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370
		Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Sr	Cd	Sb	Bi	Ca	P	Cr	Mg
		kg	ppb	%	%	%	%	ppm	%	%	%	%	%	%	%	%	%	%	%	%	%
		0.01	2	0.001	0.001	0.02	0.01	2	0.001	0.001	0.01	0.01	0.02	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01
BLK	Blank																				
BLK	Blank		4																		
BLK	Blank		4																		
BLK	Blank																				
BLK	Blank		2																		
BLK	Blank		3																		
Prep Wash																					
ROCK-VAN	Prep Blank		5	<0.001	<0.001	<0.02	<0.01	<2	<0.001	<0.001	0.06	2.13	<0.02	0.02	<0.001	<0.01	<0.01	1.75	0.04	<0.001	0.52
ROCK-VAN	Prep Blank		49	<0.001	<0.001	<0.02	<0.01	<2	<0.001	<0.001	0.06	2.08	<0.02	0.02	<0.001	<0.01	<0.01	1.48	0.04	<0.001	0.45



Bureau Veritas Commodities Canada Ltd.  
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada  
PHONE (604) 253-3158

**Client:** **Bul River Mineral Corporation**  
Box 845  
Cranbrook British Columbia V1C 4J6 Canada

Project: Bul River  
Report Date: September 12, 2019

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# QUALITY CONTROL REPORT

VAN19002348.1

		MA370	MA370	MA370	MA370	MA370	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200
		Al	Na	K	W	S	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb
		%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm
		0.01	0.01	0.01	0.01	0.05	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1
BLK	Blank						<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1
BLK	Blank																				
BLK	Blank																				
BLK	Blank						<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1
BLK	Blank																				
BLK	Blank																				
Prep Wash																					
ROCK-VAN	Prep Blank	7.63	3.60	1.77	<0.01	<0.05	1.0	4.3	2.3	36	<0.1	1.4	3.7	445	1.78	1.3	4.4	2.3	24	<0.1	<0.1
ROCK-VAN	Prep Blank	6.38	3.57	1.66	<0.01	<0.05	1.0	2.1	1.9	34	<0.1	0.6	3.2	454	1.76	1.2	35.2	1.8	26	<0.1	<0.1



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9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

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Box 845

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Project: Bul River

Report Date: September 12, 2019

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# QUALITY CONTROL REPORT

**VAN19002348.1**

		AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200
		Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se
		ppm	ppm	%	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm
		0.1	1	0.01	0.001	1	1	0.01	1	0.001	20	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5
BLK	Blank	<0.1	<1	<0.01	<0.001	<1	<1	<0.01	<1	<0.001	<20	<0.01	<0.001	<0.01	<0.1	0.01	<0.1	<0.1	<0.05	<1	<0.5
BLK	Blank																				
BLK	Blank																				
BLK	Blank	<0.1	<1	<0.01	<0.001	<1	<1	<0.01	<1	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5
BLK	Blank																				
BLK	Blank																				
Prep Wash																					
ROCK-VAN	Prep Blank	<0.1	26	0.66	0.040	6	4	0.44	56	0.085	<20	0.94	0.107	0.10	<0.1	<0.01	2.7	<0.1	<0.05	4	<0.5
ROCK-VAN	Prep Blank	<0.1	22	0.61	0.038	7	4	0.39	66	0.082	<20	0.83	0.090	0.09	0.1	<0.01	2.5	<0.1	<0.05	3	<0.5



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Project: Bul River  
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# QUALITY CONTROL REPORT

VAN19002348.1

		AQ200 Te ppm 0.2
BLK	Blank	<0.2
BLK	Blank	
BLK	Blank	
BLK	Blank	<0.2
BLK	Blank	
BLK	Blank	
Prep Wash		
ROCK-VAN	Prep Blank	<0.2
ROCK-VAN	Prep Blank	<0.2



Bureau Veritas Commodities Canada Ltd.  
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada  
PHONE (604) 253-3158

**Client:** **Bul River Mineral Corporation**  
Box 845  
Cranbrook British Columbia V1C 4J6 Canada

Submitted By: Jill Christmann  
Receiving Lab: Canada-Vancouver  
Received: September 09, 2019  
Report Date: September 12, 2019  
Page: 1 of 2

# CERTIFICATE OF ANALYSIS

VAN19002573.1

## CLIENT JOB INFORMATION

Project: Bull River  
Shipment ID: BR-EXP\_04\_2019  
P.O. Number  
Number of Samples: 16

## SAMPLE DISPOSAL

IMM-PLP Return immediately after analysis  
DISP-RJT Dispose of Reject After 60 days

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

## SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
BAT01	1	Batch charge of <20 samples			VAN
PRP70-250	13	Crush, split and pulverize 250 g rock to 200 mesh			VAN
SLBHP	3	Sort, label and box pulps			VAN
FA330-Au	16	Fire assay fusion Au by ICP-ES	30	Completed	VAN
EN002	16	Environmental disposal charge-Fire assay lead waste			VAN
MA370	16	4-Acid Digestion ICP-ES Finish	0.5	Completed	VAN
EN001-MA	16	Environmental disposal fee - Multi-acid neutralization			VAN
MA200	16	4 Acid digestion ICP-MS analysis	0.25	Completed	VAN

## ADDITIONAL COMMENTS

Invoice To: Bul River Mineral Corporation  
Box 845  
Cranbrook British Columbia V1C 4J6  
Canada

CC: Tim Hewison

  
MAY LAI  
Data Validation Specialist



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client: Bul River Mineral Corporation**

Box 845  
Cranbrook British Columbia V1C 4J6 Canada

Project: Bull River

Report Date: September 12, 2019

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Part: 1 of 4

# CERTIFICATE OF ANALYSIS

**VAN19002573.1**

Method	WGHT	FA330	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370
Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Sr	Cd	Sb	Bi	Ca	P	Cr	Mg	
Unit	kg	ppb	%	%	%	%	ppm	%	%	%	%	%	%	%	%	%	%	%	%	%	
MDL	0.01	2	0.001	0.001	0.02	0.01	2	0.001	0.001	0.01	0.01	0.02	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01	
0027244	Rock Pulp	0.11	179	<0.001	0.136	0.05	0.19	10	0.002	0.002	0.07	7.73	0.02	<0.01	<0.001	<0.01	<0.01	1.26	0.02	0.006	1.87
0027245	Drill Core	3.58	6	<0.001	0.023	<0.02	<0.01	<2	0.002	0.002	0.71	8.92	<0.02	0.01	<0.001	<0.01	<0.01	7.09	<0.01	<0.001	2.81
0027251	Drill Core	5.55	74	<0.001	0.009	<0.02	<0.01	<2	0.001	<0.001	0.31	5.79	<0.02	<0.01	<0.001	<0.01	<0.01	4.35	0.03	0.002	2.16
0027252	Drill Core	2.78	59	<0.001	0.011	<0.02	<0.01	<2	0.001	<0.001	0.58	9.24	<0.02	<0.01	<0.001	<0.01	<0.01	6.84	0.02	0.002	3.09
0027253	Rock Pulp	0.11	5	<0.001	0.002	<0.02	<0.01	<2	<0.001	<0.001	0.07	2.75	<0.02	0.02	<0.001	<0.01	<0.01	1.65	0.04	<0.001	0.54
0027254	Drill Core	2.69	34	<0.001	0.085	<0.02	0.01	<2	<0.001	<0.001	0.50	11.14	<0.02	<0.01	<0.001	<0.01	<0.01	4.28	0.02	0.002	3.58
0027255	Drill Core	3.02	81	<0.001	0.099	<0.02	<0.01	<2	0.002	<0.001	1.01	22.82	<0.02	<0.01	<0.001	<0.01	<0.01	3.34	<0.01	0.002	5.83
0027259	Drill Core	0.99	113	<0.001	0.651	<0.02	0.02	12	0.002	0.001	0.65	12.11	<0.02	<0.01	<0.001	<0.01	<0.01	10.46	0.01	0.001	4.99
0027260	Drill Core	4.36	6	<0.001	0.008	<0.02	<0.01	<2	0.001	<0.001	0.19	3.75	<0.02	<0.01	<0.001	<0.01	<0.01	3.32	0.04	0.002	1.72
0035272	Drill Core	0.54	18	<0.001	0.150	<0.02	<0.01	<2	0.019	0.011	0.04	15.30	<0.02	<0.01	<0.001	<0.01	<0.01	0.31	0.05	0.003	0.65
0035275	Drill Core	1.39	6	<0.001	0.003	<0.02	<0.01	<2	0.003	0.010	0.76	26.01	<0.02	<0.01	<0.001	<0.01	<0.01	0.14	<0.01	0.003	2.17
0035276	Drill Core	1.09	10	<0.001	0.004	<0.02	<0.01	<2	0.003	0.038	0.93	28.05	0.04	<0.01	<0.001	<0.01	<0.01	0.19	<0.01	0.002	3.83
0035277	Drill Core	0.54	11	<0.001	0.011	<0.02	0.01	<2	0.007	0.015	0.11	7.14	<0.02	<0.01	<0.001	<0.01	<0.01	0.10	0.04	0.004	0.78
0035280	Drill Core	1.55	4	<0.001	0.001	<0.02	<0.01	<2	0.001	0.003	0.17	5.90	<0.02	<0.01	<0.001	<0.01	<0.01	0.07	0.02	0.002	0.80
0035284	Rock Pulp	0.11	3327	0.039	1.359	0.06	0.73	78	0.002	0.004	0.11	7.90	<0.02	0.02	0.003	<0.01	<0.01	2.96	0.03	0.003	1.50
0035285	Drill Core	1.55	8	<0.001	0.003	<0.02	<0.01	<2	0.002	0.010	0.19	5.52	<0.02	<0.01	<0.001	<0.01	<0.01	0.06	0.01	0.004	0.80



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:** **Bul River Mineral Corporation**

Box 845  
Cranbrook British Columbia V1C 4J6 Canada

Project: Bull River

Report Date: September 12, 2019

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# CERTIFICATE OF ANALYSIS

**VAN19002573.1**

Method	MA370	MA370	MA370	MA370	MA370	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	
Analyte	Al	Na	K	W	S	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb	
Unit	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	
MDL	0.01	0.01	0.01	0.01	0.05	0.1	0.1	0.1	1	0.1	0.1	0.2	1	0.01	1	0.1	0.1	1	0.1	0.1	
0027244	Rock Pulp	5.73	0.14	1.25	<0.01	4.07	3.4	1324.3	531.3	1901	11.3	20.4	21.9	650	7.73	221	1.5	3.5	68	13.4	29.0
0027245	Drill Core	1.44	0.01	0.24	<0.01	1.13	0.4	231.0	11.7	55	0.5	23.4	20.0	6718	8.12	75	0.4	1.3	126	0.1	1.4
0027251	Drill Core	5.30	0.03	2.31	<0.01	0.37	1.1	91.6	5.0	40	0.1	12.2	5.8	2920	5.47	10	1.8	7.8	45	<0.1	1.1
0027252	Drill Core	3.22	0.02	1.10	<0.01	0.38	1.0	106.0	4.5	49	0.2	9.8	7.1	5743	8.57	4	1.0	4.9	60	<0.1	0.7
0027253	Rock Pulp	7.72	3.58	1.59	<0.01	<0.05	4.1	21.8	2.7	34	<0.1	7.2	4.4	733	2.72	2	1.3	3.0	210	<0.1	0.3
0027254	Drill Core	4.24	0.03	1.87	<0.01	0.19	0.5	838.0	3.2	116	1.3	9.3	4.0	4875	10.27	6	1.2	4.6	28	0.6	1.1
0027255	Drill Core	1.60	0.02	0.35	<0.01	0.31	0.5	985.4	4.2	72	1.7	16.6	7.2	9524	22.36	5	0.6	2.7	33	0.2	0.6
0027259	Drill Core	2.20	0.02	0.79	<0.01	1.12	0.4	6360.0	5.6	153	9.8	19.2	10.5	6091	10.92	18	0.8	3.5	79	1.0	0.9
0027260	Drill Core	6.30	0.04	3.22	<0.01	0.44	2.5	86.1	4.0	22	0.2	9.1	6.5	1863	3.59	22	2.2	9.8	41	<0.1	1.5
0035272	Drill Core	7.40	0.04	3.72	<0.01	10.28	0.6	1414.3	37.4	16	0.5	166.7	104.5	408	14.00	9	2.1	11.5	15	0.1	4.3
0035275	Drill Core	4.10	0.04	1.98	<0.01	0.36	0.7	34.4	10.0	31	0.1	24.5	92.6	7102	24.81	111	2.0	7.7	16	<0.1	7.7
0035276	Drill Core	1.79	0.03	0.85	<0.01	0.43	0.3	40.9	14.2	28	0.1	25.2	320.5	8308	25.77	299	0.6	3.2	11	<0.1	3.0
0035277	Drill Core	9.06	0.07	4.32	<0.01	1.17	0.8	106.9	57.5	136	0.4	60.4	142.2	1029	6.58	178	3.1	14.5	37	0.4	5.1
0035280	Drill Core	6.32	0.04	3.21	<0.01	0.07	0.2	12.0	4.8	12	<0.1	10.4	27.2	1611	5.50	35	1.7	12.7	8	<0.1	2.6
0035284	Rock Pulp	5.97	0.96	1.86	<0.01	4.55	365.9	>10000	532.8	6662	75.8	21.4	38.8	1008	7.24	105	2.2	6.8	170	27.9	53.4
0035285	Drill Core	7.13	0.05	3.60	<0.01	0.23	0.3	26.4	16.8	22	<0.1	16.9	94.3	1783	5.22	129	1.8	12.5	10	<0.1	4.2



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:** **Bul River Mineral Corporation**

Box 845

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Project: Bull River

Report Date: September 12, 2019

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Part: 3 of 4

# CERTIFICATE OF ANALYSIS

**VAN19002573.1**

Method	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	
Analyte	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Ce	Sn	Y	Nb	Ta	Be	
Unit	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
MDL	0.1	1	0.01	0.001	0.1	1	0.01	1	0.001	0.01	0.001	0.01	0.1	0.1	1	0.1	0.1	0.1	0.1	0.1	
0027244	Rock Pulp	8.3	63	1.22	0.029	14.3	62	1.79	26	0.153	5.31	0.146	1.27	6.6	54.1	31	13.4	11.6	3.7	0.3	1
0027245	Drill Core	0.7	10	6.78	0.006	11.0	6	2.69	93	0.017	1.41	0.012	0.21	0.1	5.4	22	0.2	30.1	0.7	<0.1	<1
0027251	Drill Core	1.2	37	4.11	0.030	29.3	22	2.04	628	0.141	5.03	0.036	2.29	0.6	63.7	52	1.8	12.3	5.8	0.4	3
0027252	Drill Core	0.6	25	6.62	0.021	23.5	15	2.97	309	0.068	3.22	0.024	1.07	0.3	33.3	42	0.8	11.0	2.7	0.2	1
0027253	Rock Pulp	<0.1	36	1.58	0.039	14.1	10	0.53	810	0.208	7.03	3.550	1.55	0.5	54.0	26	2.1	16.0	5.1	0.4	<1
0027254	Drill Core	0.2	33	4.07	0.018	11.3	19	3.36	501	0.092	4.14	0.033	1.83	0.5	51.0	23	1.6	10.9	4.1	0.2	3
0027255	Drill Core	0.3	14	3.15	0.008	11.2	8	5.53	102	0.024	1.58	0.019	0.34	0.1	19.7	24	0.3	14.3	1.1	<0.1	<1
0027259	Drill Core	0.7	16	9.53	0.014	41.1	11	4.66	175	0.035	2.20	0.022	0.69	0.2	23.5	79	0.9	15.1	1.3	<0.1	1
0027260	Drill Core	0.4	44	3.20	0.036	37.2	25	1.62	713	0.192	6.06	0.045	3.13	0.8	80.8	73	2.3	14.6	7.7	0.5	5
0035272	Drill Core	3.0	57	0.29	0.045	30.8	23	0.60	25	0.161	6.47	0.048	3.65	1.5	49.0	67	2.9	9.1	5.2	0.3	3
0035275	Drill Core	0.8	32	0.15	0.008	22.5	22	2.01	140	0.060	3.98	0.038	1.86	0.6	30.8	47	1.6	11.1	2.2	0.1	2
0035276	Drill Core	0.9	13	0.19	0.005	17.1	8	3.41	53	0.023	1.66	0.025	0.75	0.4	16.6	35	0.6	8.2	0.9	<0.1	<1
0035277	Drill Core	2.0	64	0.09	0.035	59.0	45	0.71	250	0.170	7.88	0.068	4.07	1.2	64.5	129	3.3	11.6	6.1	0.4	3
0035280	Drill Core	0.3	37	0.06	0.020	42.2	25	0.74	214	0.152	5.61	0.046	3.07	1.3	31.2	89	2.6	7.1	6.5	0.4	2
0035284	Rock Pulp	7.4	69	2.76	0.034	18.9	24	1.37	41	0.195	5.35	0.934	1.78	3.8	64.5	38	9.0	14.1	6.4	0.5	1
0035285	Drill Core	0.6	48	0.05	0.016	40.7	31	0.74	249	0.162	6.16	0.051	3.45	1.2	41.3	86	2.5	7.2	6.1	0.4	2





Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:** **Bul River Mineral Corporation**

Box 845

Cranbrook British Columbia V1C 4J6 Canada

Project: Bull River

Report Date: September 12, 2019

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# CERTIFICATE OF ANALYSIS

**VAN19002573.1**

Method	Analyte	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200
		Sc	Li	S	Rb	Hf	In	Re	Se	Te	Tl
Unit		ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL		1	0.1	0.1	0.1	0.1	0.05	0.005	1	0.5	0.5
0027244	Rock Pulp	11	35.1	4.0	47.6	1.6	1.08	<0.005	24	<0.5	5.8
0027245	Drill Core	5	11.8	1.1	8.1	0.1	0.34	<0.005	<1	0.6	<0.5
0027251	Drill Core	7	20.6	0.4	83.0	1.9	0.26	<0.005	<1	<0.5	1.0
0027252	Drill Core	5	16.1	0.4	42.2	1.0	0.35	<0.005	<1	0.5	<0.5
0027253	Rock Pulp	6	1.8	<0.1	30.2	1.6	<0.05	<0.005	<1	<0.5	<0.5
0027254	Drill Core	6	17.8	0.2	70.2	1.4	0.99	<0.005	<1	0.7	0.8
0027255	Drill Core	3	9.1	0.3	13.4	0.5	2.04	<0.005	<1	<0.5	<0.5
0027259	Drill Core	4	15.9	1.1	28.3	0.7	1.97	<0.005	<1	0.8	<0.5
0027260	Drill Core	8	18.7	0.4	115.6	2.5	0.18	<0.005	<1	<0.5	1.2
0035272	Drill Core	10	17.5	9.0	172.3	1.5	0.08	<0.005	3	<0.5	0.9
0035275	Drill Core	12	10.7	0.3	93.4	0.9	1.77	<0.005	<1	<0.5	<0.5
0035276	Drill Core	6	5.7	0.4	39.8	0.4	2.41	<0.005	<1	<0.5	<0.5
0035277	Drill Core	11	17.7	1.1	174.8	2.0	0.32	<0.005	<1	<0.5	1.1
0035280	Drill Core	9	10.5	<0.1	147.8	0.9	0.22	<0.005	<1	<0.5	0.7
0035284	Rock Pulp	8	27.0	4.1	58.0	2.2	1.99	2.321	12	0.9	2.1
0035285	Drill Core	9	10.9	0.2	164.9	1.2	0.33	<0.005	<1	<0.5	0.9



Bureau Veritas Commodities Canada Ltd.  
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada  
PHONE (604) 253-3158

**Client:** **Bul River Mineral Corporation**  
Box 845  
Cranbrook British Columbia V1C 4J6 Canada

**Project:** Bull River  
**Report Date:** September 12, 2019

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Part: 1 of 4

# QUALITY CONTROL REPORT

VAN19002573.1

Method	WGHT	FA330	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370
Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Sr	Cd	Sb	Bi	Ca	P	Cr	Mg	
Unit	kg	ppb	%	%	%	%	ppm	%	%	%	%	%	%	%	%	%	%	%	%	%	
MDL	0.01	2	0.001	0.001	0.02	0.01	2	0.001	0.001	0.01	0.01	0.02	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01	
Pulp Duplicates																					
0035284	Rock Pulp	0.11	3327	0.039	1.359	0.06	0.73	78	0.002	0.004	0.11	7.90	<0.02	0.02	0.003	<0.01	<0.01	2.96	0.03	0.003	1.50
REP 0035284	QC			0.039	1.366	0.06	0.74	78	0.002	0.004	0.11	7.97	<0.02	0.02	0.002	<0.01	<0.01	2.95	0.03	0.003	1.52
0035285	Drill Core	1.55	8	<0.001	0.003	<0.02	<0.01	<2	0.002	0.010	0.19	5.52	<0.02	<0.01	<0.001	<0.01	<0.01	0.06	0.01	0.004	0.80
REP 0035285	QC		8																		
Core Reject Duplicates																					
0035275	Drill Core	1.39	6	<0.001	0.003	<0.02	<0.01	<2	0.003	0.010	0.76	26.01	<0.02	<0.01	<0.001	<0.01	<0.01	0.14	<0.01	0.003	2.17
DUP 0035275	QC		5	<0.001	0.003	<0.02	<0.01	<2	0.002	0.009	0.76	26.01	<0.02	<0.01	<0.001	<0.01	<0.01	0.13	<0.01	0.003	2.21
Reference Materials																					
STD CDN-ME-14	Standard			0.002	1.245	0.49	3.20	41	0.002	0.017	0.09	17.91	<0.02	<0.01	0.008	<0.01	<0.01	0.75	0.02	0.002	1.31
STD CDN-ME-9	Standard			<0.001	0.663	<0.02	0.01	5	0.942	0.017	0.12	13.95	<0.02	0.03	<0.001	<0.01	<0.01	4.18	0.06	0.029	4.10
STD OREAS25A-4A	Standard																				
STD OREAS45E	Standard																				
STD OXC152	Standard		214																		
STD OXH139	Standard		1288																		
STD OXC152 Expected			216																		
STD OXH139 Expected			1312																		
STD CDN-ME-14 Expected				1.221	0.495	3.17	43.5	0.002	0.0172	0.0883	18.04	0.0088		0.0088		0.0094	0.747	0.0147	0.0014	1.28	
STD CDN-ME-9 Expected				0.654		0.012		0.93	0.0169	0.121	13.84		0.03				4.21	0.06	0.0284	4.05	
STD OREAS25A-4A Expected																					
STD OREAS45E Expected																					
BLK	Blank		3																		
BLK	Blank			<0.001	<0.001	<0.02	<0.01	<2	<0.001	<0.001	<0.01	<0.01	<0.02	<0.01	<0.001	<0.01	<0.01	<0.01	<0.01	<0.001	<0.01
BLK	Blank																				
Prep Wash																					
ROCK-VAN	Prep Blank		3	<0.001	<0.001	<0.02	<0.01	<2	<0.001	<0.001	0.06	2.17	<0.02	0.02	<0.001	<0.01	<0.01	1.66	0.04	<0.001	0.50
ROCK-VAN	Prep Blank		2	<0.001	<0.001	<0.02	<0.01	<2	<0.001	<0.001	0.07	2.18	<0.02	0.02	<0.001	<0.01	<0.01	1.66	0.04	<0.001	0.51



Bureau Veritas Commodities Canada Ltd.  
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada  
PHONE (604) 253-3158

Project: Bull River  
Report Date: September 12, 2019

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# QUALITY CONTROL REPORT

VAN19002573.1

Method	Analyte	MA370	MA370	MA370	MA370	MA370	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200
		Al	Na	K	W	S	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb
Unit		%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL		0.01	0.01	0.01	0.01	0.05	0.1	0.1	0.1	1	0.1	0.1	0.2	1	0.01	1	0.1	0.1	1	0.1	0.1
Pulp Duplicates																					
0035284	Rock Pulp	5.97	0.96	1.86	<0.01	4.55	365.9	>10000	532.8	6662	75.8	21.4	38.8	1008	7.24	105	2.2	6.8	170	27.9	53.4
REP 0035284	QC	5.94	0.98	1.93	<0.01	4.59															
0035285	Drill Core	7.13	0.05	3.60	<0.01	0.23	0.3	26.4	16.8	22	<0.1	16.9	94.3	1783	5.22	129	1.8	12.5	10	<0.1	4.2
REP 0035285	QC						0.4	24.5	15.1	22	<0.1	17.2	96.4	1771	5.13	129	1.9	12.0	10	<0.1	4.2
Core Reject Duplicates																					
0035275	Drill Core	4.10	0.04	1.98	<0.01	0.36	0.7	34.4	10.0	31	0.1	24.5	92.6	7102	24.81	111	2.0	7.7	16	<0.1	7.7
DUP 0035275	QC	4.01	0.04	1.90	<0.01	0.31	0.8	34.8	9.8	31	0.1	22.8	87.3	7135	24.36	112	2.0	7.3	16	<0.1	7.6
Reference Materials																					
STD CDN-ME-14	Standard	4.66	0.54	1.69	<0.01	16.01															
STD CDN-ME-9	Standard	6.95	1.92	0.63	<0.01	2.49															
STD OREAS25A-4A	Standard						2.3	33.8	25.5	41	<0.1	45.4	7.6	496	6.61	10	3.0	15.5	47	<0.1	0.7
STD OREAS45E	Standard						2.4	757.2	19.4	46	0.3	456.0	56.1	564	24.07	17	2.7	14.3	18	<0.1	1.0
STD OXC152	Standard																				
STD OXH139	Standard																				
STD OXC152 Expected																					
STD OXH139 Expected																					
STD CDN-ME-14 Expected		4.47	0.53	1.7		16.14															
STD CDN-ME-9 Expected		6.74	1.86	0.616		2.58															
STD OREAS25A-4A Expected							2.41	33.9	25.2	44.4		45.8	7.7	480	6.6	9.94	2.94	15.8	48.5		0.65
STD OREAS45E Expected							2.4	780	18.2	46.7	0.311	454	57	570	24.12	16.3	2.41	12.9	15.9	0.06	1
BLK	Blank																				
BLK	Blank	<0.01	<0.01	<0.01	<0.01	<0.05															
BLK	Blank						<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.2	2	<0.01	<1	<0.1	<0.1	<1	<0.1	<0.1
Prep Wash																					
ROCK-VAN	Prep Blank	7.66	3.66	1.60	<0.01	<0.05	1.2	7.3	7.9	60	<0.1	0.9	3.7	610	2.04	2	1.4	3.2	204	0.1	0.4
ROCK-VAN	Prep Blank	7.77	3.69	1.62	<0.01	<0.05	1.0	7.0	6.5	66	<0.1	0.9	3.7	649	2.09	3	1.4	3.2	205	0.1	0.2



Bureau Veritas Commodities Canada Ltd.  
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada  
PHONE (604) 253-3158

**Client:** **Bul River Mineral Corporation**  
Box 845  
Cranbrook British Columbia V1C 4J6 Canada

**Project:** Bull River  
**Report Date:** September 12, 2019

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Part: 3 of 4

# QUALITY CONTROL REPORT

VAN19002573.1

Method	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	
Analyte	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Ce	Sn	Y	Nb	Ta	Be	
Unit	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
MDL	0.1	1	0.01	0.001	0.1	1	0.01	1	0.001	0.01	0.001	0.01	0.1	0.1	1	0.1	0.1	0.1	0.1	1	
Pulp Duplicates																					
0035284	Rock Pulp	7.4	69	2.76	0.034	18.9	24	1.37	41	0.195	5.35	0.934	1.78	3.8	64.5	38	9.0	14.1	6.4	0.5	1
REP 0035284	QC																				
0035285	Drill Core	0.6	48	0.05	0.016	40.7	31	0.74	249	0.162	6.16	0.051	3.45	1.2	41.3	86	2.5	7.2	6.1	0.4	2
REP 0035285	QC	0.6	47	0.05	0.016	39.8	31	0.73	241	0.153	6.12	0.054	3.44	1.3	41.0	86	2.8	7.1	6.1	0.4	2
Core Reject Duplicates																					
0035275	Drill Core	0.8	32	0.15	0.008	22.5	22	2.01	140	0.060	3.98	0.038	1.86	0.6	30.8	47	1.6	11.1	2.2	0.1	2
DUP 0035275	QC	0.8	31	0.15	0.008	20.6	22	2.07	133	0.055	3.86	0.038	1.79	0.5	27.0	42	1.4	10.2	2.4	0.1	2
Reference Materials																					
STD CDN-ME-14	Standard																				
STD CDN-ME-9	Standard																				
STD OREAS25A-4A	Standard	0.4	161	0.26	0.048	20.8	121	0.36	152	0.897	8.92	0.139	0.49	1.9	150.4	44	4.4	9.8	19.2	1.4	<1
STD OREAS45E	Standard	0.3	317	0.06	0.032	11.7	987	0.17	250	0.503	6.86	0.056	0.35	1.0	95.8	24	1.3	8.2	5.9	0.5	<1
STD OXC152	Standard																				
STD OXH139	Standard																				
STD OXC152 Expected																					
STD OXH139 Expected																					
STD CDN-ME-14 Expected																					
STD CDN-ME-9 Expected																					
STD OREAS25A-4A Expected		0.37	157	0.301	0.048	21.8	115	0.327	147	0.93	8.87	0.131	0.482	2	155	47.3	4.06	10.5	20.9	1.4	0.93
STD OREAS45E Expected		0.28	322	0.065	0.034	11	979	0.156	252	0.559	6.78	0.059	0.324	1.07	97	23.5	1.32	8.28	6.8	0.54	
BLK	Blank																				
BLK	Blank																				
BLK	Blank	<0.1	<1	<0.01	<0.001	<0.1	<1	<0.01	<1	<0.001	<0.01	0.001	<0.01	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<1
Prep Wash																					
ROCK-VAN	Prep Blank	<0.1	31	1.54	0.039	13.9	3	0.47	758	0.215	6.67	3.550	1.58	0.4	53.4	24	0.9	16.3	5.7	0.5	1
ROCK-VAN	Prep Blank	<0.1	32	1.52	0.041	13.7	3	0.49	752	0.218	6.73	3.559	1.59	0.3	54.2	25	0.8	16.2	5.3	0.4	1



Bureau Veritas Commodities Canada Ltd.  
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada  
PHONE (604) 253-3158

**Client:** **Bul River Mineral Corporation**  
Box 845  
Cranbrook British Columbia V1C 4J6 Canada

**Project:** Bull River  
**Report Date:** September 12, 2019

**Page:** 1 of 1

**Part:** 4 of 4

# QUALITY CONTROL REPORT

VAN19002573.1

Method	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200
Analyte	Sc	Li	S	Rb	Hf	In	Re	Se	Te	Tl	
Unit	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
MDL	1	0.1	0.1	0.1	0.1	0.05	0.005	1	0.5	0.5	
Pulp Duplicates											
0035284	Rock Pulp	8	27.0	4.1	58.0	2.2	1.99	2.321	12	0.9	2.1
REP 0035284	QC										
0035285	Drill Core	9	10.9	0.2	164.9	1.2	0.33	<0.005	<1	<0.5	0.9
REP 0035285	QC	10	11.7	0.2	160.2	1.3	0.30	<0.005	<1	<0.5	0.8
Core Reject Duplicates											
0035275	Drill Core	12	10.7	0.3	93.4	0.9	1.77	<0.005	<1	<0.5	<0.5
DUP 0035275	QC	11	9.7	0.3	89.2	0.9	1.86	<0.005	<1	<0.5	<0.5
Reference Materials											
STD CDN-ME-14	Standard										
STD CDN-ME-9	Standard										
STD OREAS25A-4A	Standard	12	40.7	<0.1	55.1	4.0	0.13	<0.005	2	<0.5	<0.5
STD OREAS45E	Standard	91	7.0	<0.1	22.2	2.9	0.10	<0.005	2	<0.5	<0.5
STD OXC152	Standard										
STD OXH139	Standard										
STD OXC152 Expected											
STD OXH139 Expected											
STD CDN-ME-14 Expected											
STD CDN-ME-9 Expected											
STD OREAS25A-4A Expected		13.7	36.7	0.047	61	4.14	0.09		2.4		0.35
STD OREAS45E Expected		93	6.58	0.046	21.2	3.11	0.099		2.97	0.1	0.15
BLK	Blank										
BLK	Blank										
BLK	Blank	<1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.005	<1	<0.5	<0.5
Prep Wash											
ROCK-VAN	Prep Blank	6	3.4	<0.1	32.5	1.8	0.08	<0.005	<1	<0.5	<0.5
ROCK-VAN	Prep Blank	6	3.6	<0.1	33.3	1.8	<0.05	<0.005	<1	<0.5	<0.5



**BUREAU VERITAS** MINERAL LABORATORIES  
Canada

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Bureau Veritas Commodities Canada Ltd.  
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada  
PHONE (604) 253-3158

**Client:** **Bul River Mineral Corporation**  
Box 845  
Cranbrook British Columbia V1C 4J6 Canada

Submitted By: Jill Christmann  
Receiving Lab: Canada-Vancouver  
Received: September 16, 2019  
Report Date: October 01, 2019  
Page: 1 of 5

# CERTIFICATE OF ANALYSIS

VAN19002638.1

## CLIENT JOB INFORMATION

Project: Bull River  
Shipment ID: BR-EXP\_05\_2019  
P.O. Number  
Number of Samples: 118

## SAMPLE DISPOSAL

IMM-PLP Return immediately after analysis  
DISP-RJT Dispose of Reject After 60 days

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

Invoice To: Bul River Mineral Corporation  
Box 845  
Cranbrook British Columbia V1C 4J6  
Canada

CC: Tim Hewison

## SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
PRP70-250	108	Crush, split and pulverize 250 g rock to 200 mesh			VAN
SLBHP	10	Sort, label and box pulps			VAN
FA330-Au	118	Fire assay fusion Au by ICP-ES	30	Completed	VAN
EN002	118	Environmental disposal charge-Fire assay lead waste			VAN
MA370	118	4-Acid Digestion ICP-ES Finish	0.5	Completed	VAN
EN001-MA	118	Environmental disposal fee - Multi-acid neutralization			VAN
MA200	118	4 Acid digestion ICP-MS analysis	0.25	Completed	VAN

## ADDITIONAL COMMENTS

  
MAY LAI  
Data Validation Specialist

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



# CERTIFICATE OF ANALYSIS

VAN19002638.1

Method	WGHT	FA330	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	
Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Sr	Cd	Sb	Bi	Ca	P	Cr	Mg	
Unit	kg	ppb	%	%	%	%	ppm	%	%	%	%	%	%	%	%	%	%	%	%	%	
MDL	0.01	2	0.001	0.001	0.02	0.01	2	0.001	0.001	0.01	0.01	0.02	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01	
27234	Drill Core	5.28	4	<0.001	0.007	<0.02	<0.01	<2	0.001	0.001	0.12	3.26	<0.02	<0.01	<0.001	<0.01	<0.01	2.39	0.05	0.003	1.43
27235	Drill Core	5.29	3	<0.001	0.006	<0.02	<0.01	<2	0.001	0.001	0.11	3.09	<0.02	<0.01	<0.001	<0.01	<0.01	2.06	0.05	0.003	1.33
27236	Drill Core	5.40	3	<0.001	0.006	<0.02	<0.01	<2	0.001	0.001	0.11	3.41	<0.02	<0.01	<0.001	<0.01	<0.01	1.96	0.04	0.003	1.31
27237	Drill Core	5.55	11	<0.001	0.011	<0.02	<0.01	<2	0.001	0.001	0.27	7.20	<0.02	<0.01	<0.001	<0.01	<0.01	1.69	0.03	0.003	2.07
27238	Drill Core	5.40	4	<0.001	0.016	<0.02	<0.01	<2	0.001	0.001	0.22	4.90	<0.02	<0.01	<0.001	<0.01	<0.01	2.52	0.04	0.003	1.68
27239	Drill Core	5.16	5	<0.001	0.014	<0.02	<0.01	<2	0.001	0.001	0.21	3.99	<0.02	<0.01	<0.001	<0.01	<0.01	3.67	0.04	0.003	1.72
27240	Drill Core	5.43	6	<0.001	0.023	<0.02	<0.01	<2	0.002	0.002	0.18	4.65	<0.02	<0.01	<0.001	<0.01	<0.01	3.32	0.03	0.003	1.75
27241	Drill Core	5.43	8	<0.001	0.029	<0.02	<0.01	<2	0.003	0.003	0.13	4.69	<0.02	<0.01	<0.001	<0.01	<0.01	2.14	0.04	0.004	1.18
27242	Drill Core	2.58	6	<0.001	0.022	<0.02	<0.01	<2	0.002	0.001	0.14	4.16	<0.02	<0.01	<0.001	<0.01	<0.01	1.63	0.04	0.003	1.18
27243	Drill Core	4.43	4	<0.001	0.019	<0.02	<0.01	<2	0.001	<0.001	0.04	4.82	<0.02	<0.01	<0.001	<0.01	<0.01	0.39	0.05	0.004	1.15
27246	Drill Core	5.30	4	<0.001	0.006	<0.02	<0.01	<2	0.002	0.001	0.03	4.61	<0.02	<0.01	<0.001	<0.01	<0.01	0.18	0.05	0.004	1.19
27247	Drill Core	2.89	7	<0.001	0.016	<0.02	<0.01	<2	0.002	0.003	0.10	5.70	0.04	<0.01	<0.001	<0.01	<0.01	0.47	0.05	0.004	1.41
27248	Drill Core	4.02	27	<0.001	0.027	<0.02	<0.01	<2	0.002	0.001	0.35	10.38	<0.02	<0.01	<0.001	<0.01	<0.01	3.24	0.03	0.003	2.86
27249	Drill Core	5.23	5	<0.001	0.010	<0.02	<0.01	<2	0.001	0.001	0.14	3.38	<0.02	<0.01	<0.001	<0.01	<0.01	1.98	0.05	0.003	1.35
27250	Drill Core	5.23	6	<0.001	0.009	<0.02	<0.01	<2	0.001	<0.001	0.16	3.45	<0.02	<0.01	<0.001	<0.01	<0.01	2.17	0.05	0.003	1.40
27256	Drill Core	5.13	10	<0.001	0.013	<0.02	<0.01	<2	0.001	0.001	0.11	3.63	<0.02	<0.01	<0.001	<0.01	<0.01	1.50	0.04	0.003	1.21
27257	Drill Core	5.37	9	<0.001	0.015	<0.02	<0.01	<2	0.001	0.001	0.23	5.50	<0.02	<0.01	<0.001	<0.01	<0.01	2.60	0.04	0.003	1.83
27258	Drill Core	6.77	7	<0.001	0.019	<0.02	<0.01	<2	0.001	<0.001	0.14	3.16	<0.02	<0.01	<0.001	<0.01	<0.01	2.09	0.04	0.003	1.29
27261	Drill Core	2.70	4	<0.001	0.008	<0.02	<0.01	<2	0.002	0.001	0.26	3.97	<0.02	<0.01	<0.001	<0.01	<0.01	3.66	0.04	0.003	1.79
27262	Drill Core	4.31	4	<0.001	0.005	<0.02	<0.01	<2	0.001	<0.001	0.26	4.97	<0.02	<0.01	<0.001	<0.01	<0.01	3.49	0.04	0.003	2.18
27263	Drill Core	3.38	6	<0.001	0.004	<0.02	<0.01	<2	0.002	0.001	0.30	5.84	<0.02	<0.01	<0.001	<0.01	<0.01	2.37	0.04	0.003	2.02
27264	Drill Core	3.26	5	<0.001	0.008	<0.02	<0.01	<2	0.001	0.001	0.10	4.40	<0.02	<0.01	<0.001	<0.01	<0.01	2.16	0.04	0.003	1.60
27265	Rock Pulp	0.11	181	<0.001	0.138	0.06	0.19	13	0.002	0.002	0.07	7.97	0.03	<0.01	0.001	<0.01	<0.01	1.26	0.03	0.006	1.86
27266	Drill Core	2.30	4	<0.001	0.008	<0.02	<0.01	<2	0.001	<0.001	0.16	5.61	<0.02	<0.01	<0.001	<0.01	<0.01	1.84	0.03	0.003	1.91
27267	Drill Core	2.70	4	<0.001	0.025	<0.02	<0.01	<2	0.004	0.005	0.39	12.24	<0.02	<0.01	<0.001	<0.01	<0.01	2.69	0.03	0.002	2.90
27268	Drill Core	2.68	6	<0.001	0.025	<0.02	<0.01	<2	0.003	0.002	0.34	12.63	<0.02	<0.01	<0.001	<0.01	<0.01	2.63	0.03	0.001	2.91
27269	Drill Core	2.73	12	<0.001	0.009	<0.02	<0.01	<2	0.002	0.003	0.05	8.84	<0.02	<0.01	<0.001	<0.01	<0.01	0.20	0.05	0.003	1.81
27270	Drill Core	2.77	22	<0.001	0.019	<0.02	<0.01	<2	0.002	0.005	0.18	8.73	<0.02	<0.01	<0.001	<0.01	<0.01	1.36	0.03	0.002	1.99
27271	Drill Core	5.27	8	<0.001	0.010	<0.02	<0.01	<2	0.002	0.002	0.23	6.30	<0.02	<0.01	<0.001	<0.01	<0.01	0.84	0.05	0.002	1.69
27272	Drill Core	5.20	4	<0.001	0.005	<0.02	<0.01	<2	0.001	<0.001	0.27	5.79	<0.02	<0.01	<0.001	<0.01	<0.01	6.68	0.03	0.002	3.30



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Canada

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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **Bul River Mineral Corporation**

Box 845

Cranbrook British Columbia V1C 4J6 Canada

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# CERTIFICATE OF ANALYSIS

VAN19002638.1

Method	Analyte	MA370	MA370	MA370	MA370	MA370	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	
		Al	Na	K	W	S	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb
Unit		%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
MDL		0.01	0.01	0.01	0.01	0.05	0.1	0.1	0.1	1	0.1	0.2	1	0.01	1	0.1	0.1	1	0.1	0.1	
27234	Drill Core	6.97	0.05	3.86	<0.01	0.72	1.3	71.2	8.5	18	0.1	12.6	11.8	1191	3.28	19	1.8	8.8	31	<0.1	1.3
27235	Drill Core	6.83	0.05	3.66	<0.01	0.66	1.0	68.8	6.5	18	0.1	10.6	13.3	1171	3.36	20	2.0	10.5	29	<0.1	1.2
27236	Drill Core	6.28	0.04	3.26	<0.01	0.51	0.8	67.7	4.1	20	0.1	10.4	12.3	1139	3.51	31	1.7	8.2	24	<0.1	1.0
27237	Drill Core	5.34	0.03	1.94	<0.01	0.77	0.6	116.5	3.5	63	0.2	13.5	11.3	2772	6.76	6	1.3	7.2	35	<0.1	0.9
27238	Drill Core	5.63	0.04	2.72	<0.01	0.67	0.9	147.4	4.7	29	0.2	11.0	14.4	2125	4.68	78	1.7	8.4	36	<0.1	1.1
27239	Drill Core	5.83	0.04	3.18	<0.01	0.70	1.2	147.1	6.3	13	0.2	13.0	12.7	2130	3.90	19	1.8	8.7	46	<0.1	1.2
27240	Drill Core	5.72	0.04	3.26	<0.01	1.17	1.1	226.6	8.2	13	0.3	19.6	16.3	1834	4.50	25	1.7	7.7	35	<0.1	1.4
27241	Drill Core	6.47	0.04	3.61	<0.01	1.40	1.2	285.7	8.3	13	0.4	23.3	26.1	1307	4.51	55	1.9	8.4	29	<0.1	1.7
27242	Drill Core	7.10	0.04	3.85	<0.01	1.01	1.7	233.0	5.6	17	0.3	16.8	12.9	1465	4.20	20	1.8	9.1	26	<0.1	1.2
27243	Drill Core	6.77	0.04	3.34	<0.01	0.49	1.3	198.6	3.9	47	0.3	12.1	8.9	446	4.87	23	1.9	9.5	10	<0.1	1.0
27246	Drill Core	7.22	0.04	3.34	<0.01	0.37	1.5	66.5	2.5	52	<0.1	19.1	13.1	321	4.74	181	2.1	11.3	8	<0.1	1.2
27247	Drill Core	6.47	0.03	2.86	<0.01	0.58	0.8	165.7	2.7	57	0.2	17.3	26.2	942	5.46	351	1.8	8.7	12	<0.1	1.4
27248	Drill Core	4.18	0.01	0.94	<0.01	0.94	0.8	275.0	3.0	88	0.3	17.7	13.8	3640	9.46	54	1.2	6.1	40	<0.1	0.9
27249	Drill Core	6.50	0.04	3.40	<0.01	0.39	1.3	93.9	4.7	25	0.2	11.5	12.2	1413	3.35	103	1.9	10.1	30	<0.1	1.2
27250	Drill Core	6.76	0.04	3.45	<0.01	0.38	1.2	96.0	4.3	23	0.2	13.7	8.1	1556	3.38	43	1.9	9.9	32	<0.1	1.4
27256	Drill Core	6.70	0.04	3.43	<0.01	0.53	1.8	129.2	2.5	25	0.2	14.2	11.6	1129	3.74	58	1.8	9.1	22	<0.1	1.2
27257	Drill Core	5.74	0.04	2.78	<0.01	0.54	2.4	154.3	3.9	30	0.2	15.8	11.6	2503	5.73	57	1.8	9.0	36	<0.1	1.3
27258	Drill Core	6.36	0.04	3.42	<0.01	0.53	0.9	190.8	3.7	19	0.3	11.2	8.4	1374	3.23	34	2.2	10.7	33	<0.1	1.4
27261	Drill Core	6.04	0.04	3.25	<0.01	0.47	2.0	83.0	4.4	21	0.1	16.0	14.3	2695	4.02	86	1.8	9.3	60	<0.1	1.5
27262	Drill Core	5.69	0.04	2.78	<0.01	0.50	2.5	52.9	4.0	30	<0.1	14.3	9.0	2733	4.98	14	1.8	8.8	46	<0.1	1.1
27263	Drill Core	5.59	0.03	2.45	<0.01	0.78	3.0	43.8	4.0	42	<0.1	16.2	12.6	2993	5.74	33	1.6	8.1	39	<0.1	1.3
27264	Drill Core	5.96	0.04	2.80	<0.01	1.04	1.6	82.6	7.8	29	0.1	14.9	13.0	987	4.42	11	1.7	9.6	26	<0.1	1.2
27265	Rock Pulp	5.21	0.13	1.30	<0.01	4.18	3.3	1439.9	558.2	2226	13.1	22.1	23.1	699	8.03	312	1.3	3.2	65	13.5	26.8
27266	Drill Core	5.64	0.04	2.45	<0.01	0.83	1.6	80.4	4.8	40	0.1	11.6	9.5	1572	5.35	7	1.8	7.8	26	<0.1	0.9
27267	Drill Core	3.50	0.02	0.77	<0.01	2.95	1.0	259.2	5.1	71	0.2	42.3	56.8	4083	11.26	121	1.0	5.6	48	<0.1	1.3
27268	Drill Core	3.18	0.01	0.24	<0.01	2.85	0.6	255.8	4.3	85	0.1	24.5	22.3	3428	11.51	5	0.9	4.8	45	<0.1	1.7
27269	Drill Core	6.75	0.04	2.33	<0.01	2.06	1.3	89.9	5.3	73	0.1	22.4	27.1	428	8.11	36	1.7	6.2	6	<0.1	1.5
27270	Drill Core	5.46	0.03	1.86	<0.01	1.53	2.6	185.6	3.3	65	0.2	21.7	48.1	1840	7.95	167	1.5	6.4	27	<0.1	1.2
27271	Drill Core	6.64	0.05	3.21	<0.01	1.01	1.7	98.3	3.4	33	0.1	17.9	16.4	2275	5.96	19	1.8	8.5	19	<0.1	1.0
27272	Drill Core	4.82	0.04	2.34	<0.01	0.70	1.5	39.4	11.5	24	0.2	10.9	6.5	2633	5.30	25	1.6	6.5	66	<0.1	1.7





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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:** **Bul River Mineral Corporation**

Box 845

Cranbrook British Columbia V1C 4J6 Canada

Project: Bull River

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# CERTIFICATE OF ANALYSIS

VAN19002638.1

Method Analyte Unit MDL	MA200 Bi ppm	MA200 V ppm	MA200 Ca %	MA200 P %	MA200 La ppm	MA200 Cr ppm	MA200 Mg %	MA200 Ba ppm	MA200 Ti %	MA200 Al %	MA200 Na %	MA200 K %	MA200 W ppm	MA200 Zr ppm	MA200 Ce ppm	MA200 Sn ppm	MA200 Y ppm	MA200 Nb ppm	MA200 Ta ppm	MA200 Be ppm	
27234	Drill Core	0.9	53	2.47	0.051	29.4	30	1.41	189	0.134	6.98	0.056	3.52	0.8	69.2	63	2.9	13.2	3.3	0.2	7
27235	Drill Core	1.0	56	2.43	0.053	48.1	31	1.43	284	0.135	7.28	0.055	3.53	0.9	74.6	96	3.2	13.8	3.8	0.2	6
27236	Drill Core	0.5	48	2.07	0.041	24.1	27	1.34	589	0.145	6.46	0.047	3.04	0.8	68.3	45	2.6	12.2	6.0	0.3	3
27237	Drill Core	0.4	44	1.73	0.032	25.4	27	2.04	134	0.090	5.52	0.029	1.84	0.4	46.5	51	1.6	11.4	4.2	0.2	3
27238	Drill Core	0.8	41	2.67	0.041	39.4	27	1.62	176	0.147	5.63	0.039	2.56	0.6	58.3	79	2.0	14.3	6.0	0.4	3
27239	Drill Core	1.7	44	3.83	0.043	45.0	28	1.69	200	0.166	5.85	0.042	2.75	0.8	64.1	90	2.4	14.1	6.0	0.4	5
27240	Drill Core	3.1	45	3.54	0.033	17.1	29	1.71	133	0.139	5.87	0.043	2.96	0.6	61.2	35	2.3	11.1	4.1	0.2	5
27241	Drill Core	4.1	46	2.29	0.044	28.5	31	1.16	246	0.191	6.42	0.049	3.37	0.9	69.6	59	2.5	12.7	6.3	0.3	5
27242	Drill Core	2.3	53	1.68	0.037	49.0	30	1.19	135	0.248	7.22	0.052	3.57	0.9	66.5	99	3.1	13.5	8.7	0.5	6
27243	Drill Core	0.7	59	0.41	0.052	30.0	37	1.17	647	0.241	7.08	0.045	3.16	1.0	58.1	60	2.9	9.9	10.0	0.6	5
27246	Drill Core	0.5	58	0.19	0.053	55.2	46	1.22	1203	0.201	7.32	0.043	3.03	0.8	63.5	114	2.8	10.4	9.4	0.6	4
27247	Drill Core	0.6	50	0.46	0.045	40.0	38	1.37	368	0.167	6.25	0.039	2.55	0.7	55.5	81	2.4	9.9	7.7	0.5	3
27248	Drill Core	0.6	37	3.47	0.030	27.8	25	2.80	287	0.081	4.36	0.016	0.88	0.2	35.3	53	0.7	8.5	3.7	0.2	2
27249	Drill Core	1.4	51	2.10	0.047	41.1	31	1.33	1004	0.229	6.65	0.046	2.51	0.9	74.6	83	2.4	13.5	9.2	0.6	4
27250	Drill Core	1.7	49	2.32	0.042	41.3	30	1.38	980	0.207	6.71	0.049	2.77	0.9	76.4	84	2.6	13.8	8.9	0.6	5
27256	Drill Core	1.0	49	1.52	0.044	36.0	30	1.23	670	0.227	6.94	0.051	2.97	0.8	73.3	75	2.4	13.2	8.7	0.6	5
27257	Drill Core	1.0	48	2.96	0.040	36.1	32	1.96	784	0.187	6.03	0.045	2.49	0.8	63.3	69	2.3	13.2	7.3	0.5	4
27258	Drill Core	1.0	51	2.34	0.046	42.1	31	1.29	855	0.219	6.55	0.052	3.14	0.7	72.2	80	2.6	14.1	8.6	0.5	5
27261	Drill Core	0.7	48	3.99	0.042	39.8	29	1.80	807	0.166	6.23	0.048	2.83	0.7	70.1	78	2.5	12.5	6.6	0.4	5
27262	Drill Core	0.4	45	3.86	0.043	41.9	29	2.22	645	0.127	5.97	0.044	2.40	0.7	72.4	82	2.0	12.5	5.3	0.3	3
27263	Drill Core	0.4	45	2.60	0.039	52.3	28	2.04	312	0.097	5.73	0.037	2.47	0.6	61.0	100	1.9	12.1	4.4	0.2	3
27264	Drill Core	1.1	45	2.34	0.037	41.8	29	1.61	127	0.102	6.06	0.041	2.67	0.6	61.6	87	1.8	10.8	3.0	0.1	3
27265	Rock Pulp	8.5	68	1.34	0.030	13.4	69	1.95	54	0.136	5.77	0.142	1.39	6.5	56.3	31	12.3	11.3	3.6	0.2	<1
27266	Drill Core	0.5	44	1.81	0.035	24.7	27	1.95	405	0.094	5.71	0.036	2.32	0.5	65.4	51	1.7	9.8	4.6	0.3	2
27267	Drill Core	1.1	29	2.82	0.029	34.6	17	3.00	53	0.037	3.66	0.016	0.81	0.2	32.0	73	0.5	10.4	1.8	<0.1	<1
27268	Drill Core	0.5	25	2.69	0.028	29.0	14	2.96	52	0.030	3.28	0.011	0.23	<0.1	26.7	60	0.2	10.5	1.3	<0.1	<1
27269	Drill Core	1.4	47	0.19	0.046	17.0	29	1.81	61	0.124	6.60	0.036	2.33	0.4	59.2	39	1.8	7.2	5.3	0.3	3
27270	Drill Core	0.6	39	1.33	0.033	20.0	25	2.01	47	0.092	5.56	0.030	1.85	0.4	51.2	39	1.3	9.4	4.1	0.2	2
27271	Drill Core	0.9	43	0.81	0.044	29.4	26	1.71	114	0.130	6.63	0.048	2.87	0.6	62.7	60	2.4	10.4	5.6	0.3	4
27272	Drill Core	0.7	35	6.42	0.027	32.9	21	3.24	513	0.075	4.94	0.040	2.03	0.5	55.1	67	1.6	12.6	1.8	0.1	3



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# CERTIFICATE OF ANALYSIS

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Method	Analyte	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200
		Sc	Li	S	Rb	Hf	In	Re	Se	Te	Tl
Unit	Unit	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL	MDL	1	0.1	0.1	0.1	0.1	0.05	0.005	1	0.5	0.5
27234	Drill Core	10	21.5	0.7	140.3	2.1	0.19	<0.005	<1	<0.5	1.6
27235	Drill Core	11	26.9	0.6	165.5	2.2	0.18	<0.005	<1	<0.5	1.5
27236	Drill Core	9	22.0	0.5	138.3	2.1	0.21	<0.005	<1	0.7	1.3
27237	Drill Core	8	29.4	0.8	79.4	1.4	0.20	<0.005	<1	0.5	0.8
27238	Drill Core	8	22.1	0.6	112.7	1.9	0.18	<0.005	<1	<0.5	1.1
27239	Drill Core	9	18.8	0.6	129.4	1.9	0.13	<0.005	<1	0.6	1.3
27240	Drill Core	9	18.4	1.0	135.7	1.7	0.16	<0.005	<1	0.8	1.4
27241	Drill Core	9	19.3	1.3	141.7	2.3	0.16	<0.005	<1	0.6	1.4
27242	Drill Core	11	23.5	0.9	147.8	1.9	0.24	<0.005	<1	<0.5	1.4
27243	Drill Core	11	24.5	0.4	129.0	1.8	0.29	<0.005	<1	<0.5	1.3
27246	Drill Core	11	25.6	0.3	131.0	1.9	0.17	<0.005	<1	<0.5	1.3
27247	Drill Core	9	24.1	0.5	103.8	1.7	0.16	<0.005	<1	<0.5	1.2
27248	Drill Core	7	19.7	0.9	35.9	0.9	0.25	<0.005	<1	0.9	0.7
27249	Drill Core	10	21.3	0.3	121.3	2.2	0.14	<0.005	<1	<0.5	1.7
27250	Drill Core	10	20.1	0.3	125.5	2.3	0.18	<0.005	<1	0.6	1.3
27256	Drill Core	10	20.8	0.5	131.7	2.4	0.17	<0.005	<1	<0.5	1.4
27257	Drill Core	10	19.7	0.5	122.9	2.2	0.26	<0.005	<1	<0.5	1.3
27258	Drill Core	10	20.1	0.5	142.9	2.5	0.27	<0.005	<1	0.6	1.5
27261	Drill Core	9	18.0	0.4	136.7	1.9	0.16	<0.005	<1	0.7	1.3
27262	Drill Core	9	19.0	0.5	113.2	1.9	0.13	<0.005	<1	0.7	1.3
27263	Drill Core	9	21.4	0.7	103.2	1.6	0.17	<0.005	<1	0.6	1.1
27264	Drill Core	9	23.0	1.0	119.3	1.9	0.17	<0.005	<1	0.7	1.2
27265	Rock Pulp	12	34.0	4.3	51.6	1.8	1.29	<0.005	25	<0.5	5.3
27266	Drill Core	9	28.9	0.8	100.5	1.9	0.14	<0.005	<1	0.7	1.2
27267	Drill Core	6	29.5	2.9	31.3	1.0	0.17	<0.005	<1	0.7	0.7
27268	Drill Core	5	39.4	2.8	9.0	0.8	0.34	<0.005	<1	0.6	0.6
27269	Drill Core	9	40.6	2.0	71.4	1.8	0.20	<0.005	1	<0.5	0.9
27270	Drill Core	8	24.7	1.5	72.3	1.6	0.19	<0.005	<1	<0.5	0.8
27271	Drill Core	10	21.8	0.9	125.6	2.3	0.25	<0.005	<1	<0.5	1.2
27272	Drill Core	6	23.0	0.6	91.5	1.7	0.17	<0.005	<1	2.8	1.0



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada  
PHONE (604) 253-3158

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# CERTIFICATE OF ANALYSIS

VAN19002638.1

Method	WGHT	FA330	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	
Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Sr	Cd	Sb	Bi	Ca	P	Cr	Mg	
Unit	kg	ppb	%	%	%	%	ppm	%	%	%	%	%	%	%	%	%	%	%	%	%	
MDL	0.01	2	0.001	0.001	0.02	0.01	2	0.001	0.001	0.01	0.01	0.02	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01	
27273	Rock Pulp	0.11	7	<0.001	0.002	<0.02	<0.01	<2	<0.001	<0.001	0.08	2.89	<0.02	0.02	<0.001	<0.01	<0.01	1.74	0.04	0.001	0.54
27274	Drill Core	2.73	4	<0.001	<0.001	<0.02	<0.01	<2	<0.001	<0.001	0.05	6.49	<0.02	<0.01	<0.001	<0.01	<0.01	0.31	0.02	0.001	1.75
27275	Drill Core	2.51	6	<0.001	0.067	<0.02	<0.01	<2	<0.001	<0.001	0.24	5.95	<0.02	<0.01	<0.001	<0.01	<0.01	2.31	<0.01	<0.001	1.77
27276	Drill Core	3.21	8	<0.001	<0.001	<0.02	0.01	<2	<0.001	0.001	0.19	10.33	<0.02	<0.01	<0.001	<0.01	<0.01	2.04	0.02	0.001	3.03
27277	Drill Core	4.36	124	<0.001	0.010	<0.02	<0.01	<2	0.002	0.003	0.45	11.87	0.04	<0.01	<0.001	<0.01	<0.01	4.00	0.02	0.002	3.35
27278	Drill Core	2.70	7	<0.001	0.006	<0.02	<0.01	<2	0.001	<0.001	0.20	4.77	<0.02	<0.01	<0.001	<0.01	<0.01	4.15	0.04	0.002	2.16
27279	Drill Core	2.82	3	<0.001	0.003	<0.02	<0.01	<2	<0.001	<0.001	0.50	5.27	<0.02	0.02	<0.001	<0.01	<0.01	9.11	<0.01	<0.001	3.14
27280	Drill Core	4.62	6	<0.001	0.015	<0.02	<0.01	<2	0.002	0.002	0.11	4.11	<0.02	<0.01	<0.001	<0.01	<0.01	2.67	0.05	0.003	1.59
27281	Drill Core	5.43	13	<0.001	0.011	<0.02	<0.01	<2	0.002	0.004	0.10	4.70	0.04	<0.01	<0.001	<0.01	<0.01	2.18	0.04	0.003	1.52
27282	Drill Core	5.28	14	<0.001	0.014	<0.02	<0.01	<2	0.002	0.002	0.19	6.14	0.02	<0.01	<0.001	<0.01	<0.01	1.83	0.04	0.003	1.89
27283	Drill Core	4.72	9	<0.001	0.008	<0.02	<0.01	<2	0.004	0.004	0.07	4.76	<0.02	<0.01	<0.001	<0.01	<0.01	1.76	0.04	0.003	1.30
27284	Drill Core	4.03	6	<0.001	0.007	<0.02	<0.01	<2	0.002	0.001	0.13	4.06	<0.02	<0.01	<0.001	<0.01	<0.01	3.39	0.04	0.003	1.82
27285	Rock Pulp	0.11	122	<0.001	0.140	0.06	0.20	13	0.002	0.002	0.07	8.35	0.03	<0.01	0.001	<0.01	<0.01	1.33	0.03	0.007	1.85
27286	Drill Core	3.34	4	<0.001	0.006	<0.02	<0.01	<2	0.001	<0.001	0.12	3.45	<0.02	<0.01	<0.001	<0.01	<0.01	3.00	0.04	0.003	1.68
27287	Drill Core	3.54	3	<0.001	0.002	<0.02	<0.01	<2	<0.001	<0.001	0.21	3.37	<0.02	<0.01	<0.001	<0.01	<0.01	5.09	0.03	0.002	2.20
27288	Drill Core	4.63	4	<0.001	0.003	<0.02	<0.01	<2	0.002	0.001	0.07	3.05	<0.02	<0.01	<0.001	<0.01	<0.01	2.18	0.05	0.003	1.25
27289	Drill Core	4.01	4	<0.001	0.003	<0.02	<0.01	<2	0.001	0.001	0.10	3.18	<0.02	<0.01	<0.001	<0.01	<0.01	2.88	0.05	0.003	1.57
27290	Drill Core	3.63	3	<0.001	0.002	<0.02	<0.01	<2	<0.001	<0.001	0.06	1.95	<0.02	<0.01	<0.001	<0.01	<0.01	1.00	0.06	0.003	1.11
27291	Drill Core	3.90	4	<0.001	0.012	<0.02	<0.01	<2	0.005	0.005	0.21	10.83	<0.02	<0.01	<0.001	<0.01	<0.01	2.02	0.03	0.002	3.07
27292	Drill Core	3.82	4	<0.001	0.002	<0.02	<0.01	<2	<0.001	<0.001	0.06	2.47	<0.02	<0.01	<0.001	<0.01	<0.01	1.12	0.05	0.002	1.15
27293	Rock Pulp	0.11	3	<0.001	0.002	<0.02	<0.01	<2	<0.001	<0.001	0.08	2.84	<0.02	0.02	<0.001	<0.01	<0.01	1.72	0.04	<0.001	0.54
27294	Drill Core	4.16	6	<0.001	0.010	<0.02	<0.01	<2	0.003	0.004	0.30	7.68	<0.02	<0.01	<0.001	<0.01	<0.01	3.06	0.04	0.002	2.48
27295	Drill Core	3.28	8	<0.001	0.003	<0.02	<0.01	<2	0.001	0.001	0.03	3.72	<0.02	<0.01	<0.001	<0.01	<0.01	0.28	0.06	0.003	1.36
27296	Drill Core	2.06	4	<0.001	0.014	<0.02	<0.01	<2	0.004	0.004	0.26	9.52	<0.02	<0.01	<0.001	<0.01	<0.01	2.68	0.04	0.002	2.48
27297	Drill Core	4.40	4	<0.001	0.006	<0.02	<0.01	<2	0.001	0.001	0.20	5.07	<0.02	<0.01	<0.001	<0.01	<0.01	3.20	0.04	0.003	2.05
27298	Drill Core	5.25	11	<0.001	0.007	<0.02	<0.01	<2	0.001	0.001	0.08	5.08	<0.02	<0.01	<0.001	<0.01	<0.01	0.64	0.05	0.003	1.45
27299	Drill Core	2.72	4	<0.001	0.003	<0.02	<0.01	<2	<0.001	<0.001	0.14	4.26	<0.02	<0.01	<0.001	<0.01	<0.01	0.96	0.05	0.003	1.33
27300	Drill Core	3.10	6	<0.001	0.006	<0.02	<0.01	<2	0.001	0.001	0.35	8.69	<0.02	<0.01	<0.001	<0.01	<0.01	2.42	0.04	0.002	2.55
35251	Drill Core	4.74	5	<0.001	0.011	<0.02	<0.01	<2	0.002	0.002	0.06	5.01	<0.02	<0.01	<0.001	<0.01	<0.01	0.51	0.05	0.003	1.09
35252	Drill Core	4.81	4	<0.001	0.019	<0.02	<0.01	<2	0.003	0.003	0.05	6.77	<0.02	<0.01	<0.001	<0.01	<0.01	0.35	0.04	0.003	1.27



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **Bul River Mineral Corporation**

Box 845  
Cranbrook British Columbia V1C 4J6 Canada

Project: Bull River

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# CERTIFICATE OF ANALYSIS

## VAN19002638.1

Method Analyte Unit MDL	MA370	MA370	MA370	MA370	MA370	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	
	Al	Na	K	W	S	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb	
	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
	0.01	0.01	0.01	0.01	0.05	0.1	0.1	0.1	1	0.1	0.1	0.2	1	0.01	1	0.1	0.1	1	0.1	0.1	
27273	Rock Pulp	7.31	3.52	1.58	<0.01	0.06	3.9	22.0	2.5	35	<0.1	7.5	4.4	705	2.73	3	1.1	2.5	200	<0.1	0.3
27274	Drill Core	3.07	0.01	0.18	<0.01	<0.05	0.3	4.0	1.5	75	<0.1	3.9	6.9	491	6.06	42	0.6	3.1	7	<0.1	0.6
27275	Drill Core	1.68	0.01	<0.01	<0.01	0.20	0.2	664.0	1.5	54	0.2	3.7	5.6	2220	5.58	47	0.3	1.8	39	<0.1	0.6
27276	Drill Core	4.09	<0.01	0.01	<0.01	0.10	1.9	7.4	2.4	109	<0.1	6.7	13.9	1725	9.00	167	1.2	6.2	33	<0.1	0.6
27277	Drill Core	3.53	<0.01	0.04	<0.01	0.67	1.2	94.8	6.9	95	<0.1	20.6	28.1	4348	10.52	452	1.1	5.0	74	<0.1	1.0
27278	Drill Core	5.64	0.05	2.97	<0.01	0.51	1.6	63.0	4.7	15	0.1	10.8	8.4	1838	4.36	45	2.0	8.3	42	<0.1	1.2
27279	Drill Core	0.10	0.02	0.04	<0.01	0.17	0.2	35.3	3.9	17	<0.1	1.4	1.4	4879	4.75	3	<0.1	0.2	140	0.1	0.3
27280	Drill Core	7.35	0.06	3.77	<0.01	0.66	1.8	136.9	4.3	20	0.1	14.7	21.7	1023	3.81	215	2.8	11.1	33	<0.1	1.5
27281	Drill Core	7.31	0.06	3.67	<0.01	0.83	1.7	101.2	4.1	24	<0.1	20.3	39.6	920	4.22	503	2.8	11.1	26	<0.1	1.7
27282	Drill Core	6.41	0.05	2.95	<0.01	0.67	2.1	136.1	4.5	37	0.1	16.0	19.6	1721	5.61	213	2.3	9.0	29	<0.1	1.5
27283	Drill Core	7.69	0.06	4.06	<0.01	1.50	2.1	82.5	11.2	15	0.3	34.3	34.3	651	4.28	91	2.7	9.1	19	<0.1	2.3
27284	Drill Core	6.48	0.05	3.35	<0.01	0.97	2.1	67.4	8.6	27	0.2	15.8	11.4	1184	3.70	25	2.5	9.3	35	<0.1	3.3
27285	Rock Pulp	5.52	0.14	1.31	<0.01	4.47	3.1	1316.9	502.0	1961	12.0	19.8	22.3	678	7.52	299	1.2	3.0	63	12.8	21.4
27286	Drill Core	6.79	0.06	3.55	<0.01	0.62	4.1	58.8	4.7	14	0.1	14.3	8.4	1123	3.33	19	2.5	9.5	38	<0.1	1.5
27287	Drill Core	3.96	0.04	2.14	<0.01	0.51	0.6	15.9	16.4	13	0.2	7.8	7.1	2008	3.17	3	1.2	5.9	64	<0.1	1.6
27288	Drill Core	6.89	0.06	3.71	<0.01	0.88	1.5	26.1	7.7	9	0.1	15.7	11.0	722	2.87	3	2.1	9.4	30	<0.1	1.4
27289	Drill Core	6.11	0.05	3.28	<0.01	0.72	1.5	27.2	11.2	11	0.1	13.6	10.7	975	3.04	8	2.0	8.5	36	<0.1	1.4
27290	Drill Core	7.46	0.06	3.88	<0.01	0.24	1.2	9.7	7.4	16	<0.1	5.1	3.9	583	1.77	2	2.1	9.5	21	<0.1	1.2
27291	Drill Core	3.95	0.02	0.94	<0.01	2.76	0.8	115.5	22.0	77	0.3	46.6	45.3	1995	9.64	3	1.1	5.2	46	<0.1	2.0
27292	Drill Core	7.01	0.06	3.65	<0.01	0.41	0.9	15.3	7.3	18	<0.1	6.9	5.1	558	2.29	3	1.9	8.4	19	<0.1	1.3
27293	Rock Pulp	7.34	3.52	1.58	<0.01	0.06	3.8	22.7	2.5	35	<0.1	7.4	4.7	764	2.75	3	1.1	2.6	214	<0.1	0.3
27294	Drill Core	5.50	0.05	2.77	<0.01	2.95	0.8	97.1	23.4	28	0.4	30.5	38.8	2738	6.96	42	1.5	7.5	56	<0.1	4.3
27295	Drill Core	8.24	0.06	4.02	<0.01	0.62	2.2	29.7	5.9	39	<0.1	11.3	9.9	252	3.54	7	2.3	9.5	9	<0.1	1.4
27296	Drill Core	4.25	0.03	1.35	<0.01	2.31	1.7	145.8	8.2	61	0.2	40.5	36.4	2503	8.68	18	1.3	5.7	57	<0.1	1.1
27297	Drill Core	5.67	0.05	2.86	<0.01	0.83	1.2	60.2	6.3	23	0.1	13.7	14.9	1871	4.78	31	1.9	9.2	41	<0.1	1.4
27298	Drill Core	7.25	0.05	3.29	<0.01	0.80	2.3	70.0	4.8	41	<0.1	14.0	13.9	790	4.80	16	2.1	9.0	14	<0.1	1.5
27299	Drill Core	6.81	0.05	3.30	<0.01	0.48	2.1	27.4	3.2	31	<0.1	8.0	7.0	1316	4.07	10	2.2	10.7	24	<0.1	1.2
27300	Drill Core	5.29	0.03	1.75	<0.01	0.80	1.5	54.8	5.7	70	<0.1	12.5	11.9	3168	7.70	15	1.6	7.6	50	<0.1	1.2
35251	Drill Core	7.36	0.05	3.46	<0.01	1.03	1.1	114.6	3.2	31	<0.1	18.5	18.0	565	4.55	63	1.8	8.0	12	<0.1	1.2
35252	Drill Core	6.02	0.04	2.49	<0.01	1.51	1.0	184.8	3.0	44	<0.1	28.2	28.6	450	6.29	79	1.7	7.6	8	<0.1	1.0



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada  
PHONE (604) 253-3158

**Client:** **Bul River Mineral Corporation**  
Box 845  
Cranbrook British Columbia V1C 4J6 Canada

**Project:** Bull River  
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# CERTIFICATE OF ANALYSIS

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Method	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	
Analyte	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Ce	Sn	Y	Nb	Ta	Be	
Unit	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
MDL	0.1	1	0.01	0.001	0.1	1	0.01	1	0.001	0.01	0.001	0.01	0.1	0.1	1	0.1	0.1	0.1	0.1	0.1	
27273	Rock Pulp	<0.1	33	1.63	0.039	11.4	12	0.53	801	0.195	6.77	3.262	1.61	0.5	49.7	23	1.9	14.6	4.9	0.3	<1
27274	Drill Core	0.1	23	0.28	0.016	17.3	14	1.71	51	0.023	3.05	0.014	0.17	<0.1	10.7	33	0.1	2.5	0.9	<0.1	<1
27275	Drill Core	<0.1	15	2.34	0.008	11.4	8	1.77	10	0.010	1.69	0.012	0.01	<0.1	4.0	22	<0.1	6.4	0.3	<0.1	<1
27276	Drill Core	0.1	26	1.87	0.021	29.6	15	2.88	8	0.028	3.98	0.008	0.01	<0.1	22.6	59	<0.1	8.0	0.9	<0.1	<1
27277	Drill Core	0.4	23	3.65	0.018	19.9	16	3.26	15	0.025	3.54	0.009	0.04	<0.1	26.4	40	<0.1	11.5	0.8	<0.1	<1
27278	Drill Core	1.9	36	3.79	0.036	41.3	25	2.10	753	0.119	5.57	0.045	2.88	0.6	70.2	83	2.1	11.5	4.2	0.2	3
27279	Drill Core	<0.1	2	8.41	<0.001	2.2	2	2.99	20	0.001	0.10	0.017	0.04	<0.1	0.3	5	0.2	14.1	<0.1	<0.1	<1
27280	Drill Core	1.3	49	2.42	0.045	33.6	31	1.51	694	0.234	6.93	0.054	3.21	0.9	92.2	70	2.5	14.3	8.7	0.5	5
27281	Drill Core	1.6	56	1.99	0.040	37.0	34	1.44	459	0.244	7.00	0.053	3.45	1.0	87.9	81	2.5	11.9	8.4	0.6	5
27282	Drill Core	1.1	52	1.69	0.033	39.4	31	1.84	425	0.194	6.19	0.044	2.90	0.8	73.3	80	2.3	11.5	6.4	0.4	3
27283	Drill Core	7.2	58	1.59	0.033	26.4	37	1.21	108	0.120	6.98	0.053	3.59	0.9	81.3	62	3.0	10.9	2.9	0.1	7
27284	Drill Core	1.3	49	3.07	0.038	25.8	30	1.76	348	0.108	6.33	0.046	3.36	0.8	85.5	49	2.4	11.8	2.9	0.2	4
27285	Rock Pulp	8.0	61	1.23	0.028	12.2	62	1.80	40	0.129	5.40	0.136	1.21	10.9	47.8	29	11.7	10.9	3.3	0.2	1
27286	Drill Core	1.3	44	2.86	0.043	34.4	27	1.70	781	0.122	6.77	0.051	3.06	0.8	100.2	71	2.5	14.6	3.2	0.2	5
27287	Drill Core	0.4	25	4.73	0.032	49.5	18	2.19	340	0.073	4.02	0.033	1.95	0.5	49.3	95	1.4	12.2	2.0	0.1	2
27288	Drill Core	0.6	44	2.03	0.051	45.0	29	1.21	598	0.120	6.53	0.051	3.26	0.7	79.0	99	2.4	12.5	3.0	0.2	4
27289	Drill Core	0.5	43	2.74	0.044	37.5	26	1.56	574	0.116	6.11	0.047	3.00	0.7	76.1	69	2.1	11.6	2.9	0.2	4
27290	Drill Core	0.3	53	0.85	0.051	68.1	28	1.03	613	0.147	6.45	0.051	2.64	0.7	71.0	150	2.6	10.8	3.7	0.2	3
27291	Drill Core	0.7	28	1.91	0.029	22.8	19	2.99	53	0.035	3.97	0.018	0.84	0.2	34.9	47	0.6	8.9	0.7	<0.1	1
27292	Drill Core	0.4	47	1.01	0.053	15.0	26	1.09	583	0.132	6.31	0.048	2.89	0.6	72.8	32	2.5	9.5	3.3	0.2	4
27293	Rock Pulp	<0.1	34	1.62	0.040	11.9	12	0.53	834	0.197	6.90	3.604	1.50	0.4	53.1	24	2.3	15.2	5.1	0.4	1
27294	Drill Core	1.4	39	2.78	0.039	44.7	23	2.41	62	0.074	5.33	0.044	2.76	0.5	53.6	88	1.6	13.2	1.6	<0.1	3
27295	Drill Core	0.6	58	0.24	0.053	67.7	28	1.30	661	0.134	6.96	0.053	3.35	0.9	87.9	135	2.7	10.8	3.1	0.2	5
27296	Drill Core	0.6	28	2.48	0.034	35.1	19	2.47	65	0.044	4.32	0.023	1.28	0.3	44.0	69	0.9	8.9	0.8	<0.1	2
27297	Drill Core	0.6	42	3.03	0.042	44.9	28	2.08	514	0.097	5.66	0.040	2.79	0.6	65.9	94	2.1	11.5	2.6	0.2	3
27298	Drill Core	0.7	54	0.56	0.043	24.5	34	1.41	253	0.122	6.20	0.044	3.32	0.8	65.8	48	2.7	8.6	5.7	0.3	4
27299	Drill Core	0.3	51	0.89	0.049	118.9	29	1.30	656	0.135	6.30	0.047	3.04	0.7	67.3	249	2.7	11.6	6.2	0.3	5
27300	Drill Core	0.3	39	2.22	0.033	58.2	25	2.50	324	0.068	5.13	0.028	1.58	0.4	57.5	111	1.3	10.9	3.1	0.2	3
35251	Drill Core	0.6	51	0.42	0.045	23.8	30	1.01	184	0.128	6.27	0.043	3.19	0.6	57.1	48	2.8	8.4	5.8	0.3	3
35252	Drill Core	0.9	42	0.30	0.037	35.2	27	1.22	60	0.094	5.41	0.036	2.44	0.6	51.7	74	1.8	7.7	4.6	0.2	3



**BUREAU VERITAS** MINERAL LABORATORIES  
Canada

[www.bureauveritas.com/um](http://www.bureauveritas.com/um)

Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:** **Bul River Mineral Corporation**

Box 845  
Cranbrook British Columbia V1C 4J6 Canada

Project: Bull River

Report Date: October 01, 2019

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# CERTIFICATE OF ANALYSIS

**VAN19002638.1**

Method	Analyte	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200
		Sc	Li	S	Rb	Hf	In	Re	Se	Te	Tl
Unit	Unit	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL	MDL	1	0.1	0.1	0.1	0.1	0.05	0.005	1	0.5	0.5
27273	Rock Pulp	6	1.8	<0.1	29.7	1.8	<0.05	<0.005	<1	<0.5	<0.5
27274	Drill Core	3	19.8	<0.1	6.0	0.3	0.08	<0.005	<1	0.6	<0.5
27275	Drill Core	3	12.6	0.2	0.7	0.1	0.20	<0.005	<1	0.7	<0.5
27276	Drill Core	5	27.3	<0.1	1.3	0.8	0.19	<0.005	<1	0.9	<0.5
27277	Drill Core	6	23.5	0.6	2.0	0.8	0.29	<0.005	<1	0.9	<0.5
27278	Drill Core	8	19.1	0.5	112.8	2.2	0.19	<0.005	<1	0.7	1.4
27279	Drill Core	8	1.2	0.1	1.8	<0.1	0.15	<0.005	<1	0.5	<0.5
27280	Drill Core	10	23.5	0.6	129.1	3.0	0.16	<0.005	<1	<0.5	1.8
27281	Drill Core	11	22.6	0.7	131.6	2.5	0.15	<0.005	1	<0.5	1.8
27282	Drill Core	10	21.4	0.6	105.9	2.2	0.24	<0.005	<1	0.7	1.4
27283	Drill Core	11	20.5	1.3	127.3	2.2	0.18	<0.005	<1	<0.5	1.4
27284	Drill Core	9	20.7	0.9	131.2	2.6	0.13	<0.005	<1	<0.5	1.3
27285	Rock Pulp	11	29.9	4.1	49.1	1.4	1.14	<0.005	23	<0.5	4.9
27286	Drill Core	10	19.6	0.6	131.0	2.9	0.13	<0.005	<1	0.7	1.7
27287	Drill Core	6	13.7	0.5	89.4	1.3	0.08	<0.005	<1	1.8	1.0
27288	Drill Core	9	17.8	0.8	134.2	2.3	0.09	<0.005	<1	<0.5	1.7
27289	Drill Core	8	18.2	0.7	136.7	2.0	0.09	<0.005	<1	<0.5	1.2
27290	Drill Core	8	20.8	0.2	110.6	2.0	0.15	<0.005	<1	<0.5	1.8
27291	Drill Core	7	29.6	2.5	37.5	1.0	0.06	<0.005	1	<0.5	0.7
27292	Drill Core	9	21.2	0.4	119.2	1.9	0.08	<0.005	<1	<0.5	1.4
27293	Rock Pulp	6	1.3	<0.1	31.1	1.8	<0.05	<0.005	<1	<0.5	<0.5
27294	Drill Core	9	37.4	2.7	112.0	1.6	0.16	<0.005	<1	0.8	1.0
27295	Drill Core	10	28.4	0.6	131.4	2.4	0.13	<0.005	<1	<0.5	1.5
27296	Drill Core	7	25.9	2.1	54.1	1.3	0.13	<0.005	<1	0.7	0.7
27297	Drill Core	8	19.1	0.8	118.0	2.0	0.21	<0.005	<1	0.6	1.1
27298	Drill Core	10	25.3	0.7	115.7	1.9	0.21	<0.005	<1	<0.5	1.3
27299	Drill Core	9	22.6	0.4	126.9	1.8	0.21	0.006	<1	<0.5	1.3
27300	Drill Core	9	23.9	0.7	69.9	1.6	0.25	<0.005	<1	0.9	0.9
35251	Drill Core	10	22.3	0.9	127.8	1.7	0.17	<0.005	1	<0.5	1.2
35252	Drill Core	8	23.7	1.4	95.9	1.5	0.19	<0.005	<1	<0.5	1.0



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:** **Bul River Mineral Corporation**  
Box 845  
Cranbrook British Columbia V1C 4J6 Canada

**Project:** Bull River  
**Report Date:** October 01, 2019

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# CERTIFICATE OF ANALYSIS

## VAN19002638.1

Method	WGHT	FA330	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	
Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Sr	Cd	Sb	Bi	Ca	P	Cr	Mg	
Unit	kg	ppb	%	%	%	%	ppm	%	%	%	%	%	%	%	%	%	%	%	%	%	
MDL	0.01	2	0.001	0.001	0.02	0.01	2	0.001	0.001	0.01	0.01	0.02	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01	
35253	Drill Core	2.49	6	<0.001	0.011	<0.02	<0.01	<2	0.003	0.002	0.02	5.62	<0.02	<0.01	<0.001	<0.01	<0.01	0.14	0.05	0.004	0.96
35293	Drill Core	1.34	6	<0.001	0.004	<0.02	<0.01	<2	0.002	0.001	0.15	4.40	<0.02	0.01	<0.001	<0.01	<0.01	4.07	0.05	0.004	2.16
35294	Drill Core	1.55	4	<0.001	0.004	<0.02	<0.01	<2	0.002	0.001	0.15	4.30	<0.02	0.01	<0.001	<0.01	<0.01	4.00	0.05	0.004	2.15
35295	Rock Pulp	0.11	173	<0.001	0.139	0.06	0.20	12	0.002	0.002	0.07	8.18	0.03	<0.01	0.001	<0.01	<0.01	1.31	0.03	0.007	1.82
35296	Drill Core	0.35	7	<0.001	0.011	<0.02	<0.01	<2	0.006	0.003	0.15	5.90	<0.02	0.01	<0.001	<0.01	<0.01	3.65	0.06	0.004	2.12
35297	Drill Core	1.25	3	<0.001	0.002	<0.02	<0.01	<2	0.001	0.001	0.08	2.67	<0.02	<0.01	<0.001	<0.01	<0.01	2.02	0.05	0.004	1.49
35298	Drill Core	0.65	4	<0.001	0.002	<0.02	<0.01	<2	0.002	0.001	0.09	4.38	<0.02	<0.01	<0.001	<0.01	<0.01	1.77	0.06	0.004	1.64
35299	Drill Core	1.07	3	<0.001	0.008	<0.02	<0.01	<2	0.004	0.002	0.13	6.89	<0.02	<0.01	<0.001	<0.01	<0.01	2.42	0.06	0.004	2.09
35300	Drill Core	0.56	33	0.002	0.013	<0.02	<0.01	<2	0.009	0.007	0.04	9.05	<0.02	<0.01	<0.001	<0.01	<0.01	0.75	0.06	0.003	1.68
35301	Drill Core	1.65	11	<0.001	0.006	<0.02	<0.01	<2	0.003	0.002	0.02	5.77	<0.02	<0.01	<0.001	<0.01	<0.01	0.20	0.07	0.004	1.34
35302	Drill Core	1.04	4	<0.001	0.007	<0.02	<0.01	<2	0.003	0.002	0.02	5.34	<0.02	<0.01	<0.001	<0.01	<0.01	0.17	0.07	0.005	1.32
35303	Drill Core	0.76	4	<0.001	0.005	<0.02	<0.01	<2	0.003	0.002	0.03	6.45	<0.02	<0.01	<0.001	<0.01	<0.01	0.17	0.07	0.005	1.61
35304	Drill Core	0.25	5	<0.001	0.014	<0.02	<0.01	<2	0.007	0.003	0.83	12.60	<0.02	0.03	<0.001	<0.01	<0.01	7.32	0.02	0.002	3.58
35305	Rock Pulp	0.11	4	<0.001	0.002	<0.02	<0.01	<2	<0.001	<0.001	0.08	2.84	<0.02	0.02	<0.001	<0.01	<0.01	1.74	0.04	0.001	0.54
35306	Drill Core	0.33	6	<0.001	0.019	<0.02	<0.01	<2	0.010	0.004	0.33	11.35	<0.02	0.01	<0.001	<0.01	<0.01	3.22	0.05	0.003	2.26
35307	Drill Core	1.12	5	<0.001	0.002	<0.02	<0.01	<2	0.001	<0.001	0.04	4.66	<0.02	<0.01	<0.001	<0.01	<0.01	0.59	0.07	0.004	1.55
35308	Drill Core	0.62	6	0.001	0.014	<0.02	<0.01	<2	0.009	0.002	0.14	8.59	<0.02	<0.01	<0.001	<0.01	<0.01	2.39	0.06	0.004	1.90
35309	Drill Core	1.96	5	<0.001	0.003	<0.02	<0.01	<2	0.002	<0.001	0.11	4.75	<0.02	<0.01	<0.001	<0.01	<0.01	2.05	0.06	0.004	1.80
35310	Drill Core	0.63	5	<0.001	0.006	<0.02	<0.01	<2	0.004	0.003	0.15	5.67	<0.02	<0.01	<0.001	<0.01	<0.01	2.69	0.06	0.004	1.89
35311	Drill Core	0.91	3	<0.001	0.002	<0.02	<0.01	<2	0.001	<0.001	0.15	3.75	<0.02	<0.01	<0.001	<0.01	<0.01	3.07	0.06	0.004	1.80
35312	Drill Core	0.58	4	<0.001	0.003	<0.02	<0.01	<2	0.002	0.001	0.02	4.48	<0.02	<0.01	<0.001	<0.01	<0.01	0.16	0.07	0.004	1.28
35313	Drill Core	1.27	6	<0.001	0.013	<0.02	<0.01	<2	0.008	0.002	0.04	8.80	<0.02	<0.01	<0.001	<0.01	<0.01	0.22	0.06	0.004	1.44
35314	Drill Core	1.44	4	<0.001	0.013	<0.02	<0.01	<2	0.007	0.002	0.02	7.72	<0.02	<0.01	<0.001	<0.01	<0.01	0.16	0.06	0.004	1.29
35315	Drill Core	1.03	5	<0.001	0.007	<0.02	<0.01	<2	0.004	0.002	1.18	29.70	<0.02	<0.01	<0.001	<0.01	<0.01	1.73	<0.01	<0.001	3.65
35316	Drill Core	0.94	5	<0.001	0.002	<0.02	<0.01	<2	0.003	0.002	1.36	32.08	<0.02	<0.01	<0.001	<0.01	<0.01	0.38	<0.01	<0.001	3.11
35317	Drill Core	1.70	4	0.001	0.003	<0.02	<0.01	<2	0.004	0.003	0.61	16.40	<0.02	<0.01	<0.001	<0.01	<0.01	0.17	0.03	0.003	1.76
35318	Rock Pulp	0.11	169	<0.001	0.139	0.06	0.20	12	0.002	0.002	0.07	8.27	0.03	<0.01	0.001	<0.01	<0.01	1.32	0.03	0.006	1.83
35319	Drill Core	1.43	6	<0.001	0.003	<0.02	<0.01	<2	0.005	0.005	0.28	10.82	<0.02	<0.01	<0.001	<0.01	<0.01	0.35	0.04	0.004	1.52
35320	Drill Core	1.65	5	<0.001	0.003	<0.02	<0.01	<2	0.002	0.002	0.04	7.11	<0.02	<0.01	<0.001	<0.01	<0.01	0.14	0.05	0.005	1.44
35321	Drill Core	1.20	5	<0.001	0.006	<0.02	<0.01	<2	0.004	0.003	0.13	7.32	<0.02	<0.01	<0.001	<0.01	<0.01	0.78	0.05	0.004	1.43



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Canada

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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:** Bul River Mineral Corporation

Box 845

Cranbrook British Columbia V1C 4J6 Canada

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# CERTIFICATE OF ANALYSIS

VAN19002638.1

Method	MA370	MA370	MA370	MA370	MA370	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	
Analyte	Al	Na	K	W	S	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb	
Unit	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	
MDL	0.01	0.01	0.01	0.01	0.05	0.1	0.1	0.1	1	0.1	0.1	0.2	1	0.01	1	0.1	0.1	1	0.1	0.1	
35253	Drill Core	7.28	0.05	3.47	<0.01	1.50	2.1	114.2	5.4	31	0.1	29.0	23.4	145	5.26	57	2.3	8.6	6	<0.1	1.2
35293	Drill Core	6.49	0.05	3.28	<0.01	0.99	2.5	42.6	4.4	25	<0.1	22.8	10.4	1444	4.08	3	2.9	10.5	136	<0.1	2.0
35294	Drill Core	6.38	0.04	3.22	<0.01	0.77	2.6	35.1	4.6	25	<0.1	22.6	9.9	1382	3.94	2	2.7	10.3	134	<0.1	2.4
35295	Rock Pulp	5.51	0.14	1.29	<0.01	4.34	3.1	1331.0	501.8	1935	11.8	19.9	22.0	642	7.49	293	1.2	3.0	62	11.4	18.4
35296	Drill Core	6.12	0.04	2.95	<0.01	2.22	2.0	105.1	9.9	30	<0.1	51.4	24.7	1427	5.59	4	2.6	11.0	118	<0.1	6.8
35297	Drill Core	8.06	0.05	4.27	<0.01	0.32	1.4	22.5	3.0	23	<0.1	12.0	9.8	744	2.60	10	3.2	12.2	73	<0.1	1.7
35298	Drill Core	7.64	0.05	3.74	<0.01	0.62	0.9	23.6	4.6	40	<0.1	17.5	11.2	817	4.16	12	2.7	11.5	61	<0.1	1.7
35299	Drill Core	6.64	0.04	2.90	<0.01	1.52	2.6	77.8	6.0	52	<0.1	38.2	21.1	1192	6.27	26	3.1	11.7	76	<0.1	2.1
35300	Drill Core	6.78	0.04	2.65	<0.01	4.66	15.5	122.4	35.1	65	0.3	78.6	66.7	377	7.94	130	2.5	10.4	26	<0.1	12.0
35301	Drill Core	7.65	0.04	3.24	<0.01	1.17	4.2	51.6	5.4	56	<0.1	26.5	15.0	170	5.17	50	2.7	8.3	12	<0.1	2.3
35302	Drill Core	7.80	0.05	3.43	<0.01	1.16	1.3	63.1	4.4	54	<0.1	27.2	20.2	167	4.79	94	2.3	9.4	10	<0.1	2.0
35303	Drill Core	7.63	0.04	3.06	<0.01	1.12	4.2	51.8	3.1	67	<0.1	27.2	16.8	236	5.78	72	2.3	9.0	10	<0.1	1.7
35304	Drill Core	3.22	0.03	1.32	<0.01	2.90	1.2	130.8	3.9	42	<0.1	57.1	23.3	7880	10.84	20	1.5	5.2	272	<0.1	2.1
35305	Rock Pulp	7.45	3.55	1.59	<0.01	0.06	4.0	20.3	2.3	32	<0.1	6.6	4.0	674	2.50	2	1.0	2.5	188	<0.1	0.3
35306	Drill Core	4.73	0.03	1.72	<0.01	4.30	1.1	172.7	6.5	57	0.1	84.4	31.8	3028	10.10	24	2.6	6.5	118	<0.1	2.8
35307	Drill Core	8.04	0.05	3.62	<0.01	0.46	3.2	22.5	2.4	55	<0.1	12.6	7.7	380	4.09	26	2.3	9.1	19	<0.1	1.8
35308	Drill Core	6.54	0.04	2.92	<0.01	2.94	11.9	138.5	4.7	49	<0.1	79.0	20.8	1387	7.99	22	2.4	9.7	67	<0.1	2.1
35309	Drill Core	7.28	0.05	3.40	<0.01	0.72	2.9	32.2	3.9	46	<0.1	19.6	8.0	990	4.49	11	2.7	10.9	62	<0.1	2.0
35310	Drill Core	6.67	0.04	3.15	<0.01	1.56	0.8	61.8	5.0	39	<0.1	33.0	24.9	1481	5.31	108	2.7	11.3	70	<0.1	2.6
35311	Drill Core	7.11	0.05	3.60	<0.01	0.39	1.1	17.4	3.0	29	<0.1	11.8	4.5	1409	3.49	4	2.5	11.8	88	<0.1	1.9
35312	Drill Core	7.76	0.04	3.42	<0.01	0.45	1.9	25.4	2.9	56	<0.1	14.3	8.9	176	4.18	39	2.4	10.0	10	<0.1	1.7
35313	Drill Core	7.03	0.04	2.85	<0.01	3.25	1.3	129.4	6.2	66	0.2	68.0	20.4	341	8.12	18	2.4	9.6	12	<0.1	2.3
35314	Drill Core	7.22	0.04	3.03	<0.01	2.42	1.4	124.4	5.1	62	0.1	59.9	22.1	207	7.23	33	2.5	9.5	11	<0.1	1.6
35315	Drill Core	0.89	0.01	0.24	<0.01	0.96	0.3	63.4	2.5	44	<0.1	38.0	14.3	>10000	28.41	8	0.5	1.4	51	<0.1	1.1
35316	Drill Core	0.85	0.02	0.35	<0.01	0.29	0.8	16.1	1.2	22	<0.1	27.1	14.3	>10000	29.71	14	0.6	1.6	8	<0.1	1.1
35317	Drill Core	4.13	0.03	1.78	<0.01	0.42	12.5	25.3	1.6	40	<0.1	39.2	24.3	5864	15.75	28	1.8	6.8	9	<0.1	1.3
35318	Rock Pulp	5.50	0.14	1.28	<0.01	4.38	3.2	1350.8	508.0	2059	12.9	20.3	22.5	640	7.79	292	1.2	3.1	63	11.8	20.8
35319	Drill Core	5.58	0.03	2.32	<0.01	0.60	7.3	31.3	1.7	50	<0.1	49.8	51.4	2676	10.09	115	2.4	9.0	12	<0.1	1.7
35320	Drill Core	7.44	0.04	2.77	<0.01	0.62	2.7	31.7	2.1	89	<0.1	21.2	17.2	330	6.70	12	2.8	9.6	10	<0.1	1.3
35321	Drill Core	6.94	0.04	2.91	<0.01	1.37	2.3	64.3	4.1	61	<0.1	36.3	24.8	1161	6.70	26	3.1	11.6	29	<0.1	2.1





Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:** Bul River Mineral Corporation

Box 845  
Cranbrook British Columbia V1C 4J6 Canada

Project: Bull River

Report Date: October 01, 2019

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# CERTIFICATE OF ANALYSIS

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Method	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	
Analyte	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Ce	Sn	Y	Nb	Ta	Be	
Unit	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
MDL	0.1	1	0.01	0.001	0.1	1	0.01	1	0.001	0.01	0.001	0.01	0.1	0.1	1	0.1	0.1	0.1	0.1	0.1	
35253	Drill Core	1.9	54	0.12	0.046	16.7	35	0.91	66	0.121	6.26	0.047	3.39	0.7	65.6	36	2.6	8.3	5.5	0.3	4
35293	Drill Core	0.7	56	3.76	0.053	38.6	37	2.15	282	0.144	6.27	0.042	2.63	0.8	77.5	81	2.1	15.6	3.8	0.2	2
35294	Drill Core	0.6	56	3.73	0.048	31.4	35	2.13	288	0.145	6.24	0.041	3.13	0.8	75.9	65	2.2	14.5	3.8	0.2	3
35295	Rock Pulp	8.1	63	1.24	0.031	12.7	61	1.80	26	0.126	5.32	0.143	1.20	2.6	50.0	29	11.3	10.7	3.3	0.2	<1
35296	Drill Core	1.4	52	3.45	0.055	37.5	37	2.12	107	0.127	6.12	0.038	2.99	0.7	68.5	83	2.0	14.8	3.2	0.2	3
35297	Drill Core	0.4	73	1.95	0.052	43.6	41	1.48	389	0.205	7.84	0.051	3.55	1.0	97.0	93	2.9	15.5	5.5	0.4	3
35298	Drill Core	0.7	64	1.71	0.055	36.8	43	1.64	359	0.141	7.26	0.043	3.05	0.8	86.6	79	3.0	13.2	3.3	0.2	3
35299	Drill Core	0.9	50	2.23	0.057	33.5	37	2.03	245	0.118	6.50	0.037	2.75	0.8	76.2	70	2.2	13.5	2.9	0.2	3
35300	Drill Core	2.6	55	0.61	0.050	38.5	33	1.52	33	0.095	5.63	0.038	2.27	0.5	70.7	84	2.1	10.9	2.2	0.1	3
35301	Drill Core	0.5	65	0.16	0.063	19.6	42	1.22	276	0.135	6.35	0.038	2.24	0.7	75.2	45	2.2	10.0	3.1	0.2	3
35302	Drill Core	0.7	66	0.14	0.063	23.7	46	1.21	308	0.138	6.43	0.037	2.46	0.8	72.8	53	2.2	9.8	3.1	0.2	2
35303	Drill Core	0.4	64	0.14	0.058	26.7	46	1.46	262	0.118	6.29	0.034	2.03	0.8	70.7	63	1.9	9.0	2.3	0.1	2
35304	Drill Core	0.6	33	6.56	0.021	13.7	22	3.29	118	0.047	3.08	0.022	1.29	0.3	32.0	25	0.9	14.5	1.0	<0.1	1
35305	Rock Pulp	<0.1	32	1.42	0.034	10.9	11	0.50	736	0.182	6.48	3.212	1.48	0.5	48.1	22	1.8	13.8	4.8	0.3	<1
35306	Drill Core	1.2	41	2.94	0.043	11.3	28	2.13	30	0.068	4.45	0.026	1.68	0.5	46.7	27	1.1	10.5	1.6	<0.1	2
35307	Drill Core	0.2	66	0.47	0.054	29.4	41	1.40	300	0.146	6.32	0.037	2.45	0.8	83.7	69	2.2	10.4	3.6	0.2	2
35308	Drill Core	0.8	55	2.23	0.051	27.9	39	1.84	69	0.110	6.28	0.037	2.85	0.7	75.0	61	1.8	13.7	2.5	0.1	3
35309	Drill Core	0.3	68	1.94	0.060	37.8	42	1.79	320	0.145	7.12	0.042	2.62	0.9	86.3	80	2.2	13.7	3.4	0.2	3
35310	Drill Core	0.5	56	2.51	0.055	46.5	39	1.83	179	0.123	6.47	0.037	2.82	0.8	77.4	105	2.0	14.1	3.0	0.2	3
35311	Drill Core	0.2	61	2.85	0.056	36.6	39	1.76	344	0.156	6.81	0.043	2.71	0.9	85.5	79	2.1	14.2	4.0	0.2	3
35312	Drill Core	0.3	68	0.14	0.063	25.3	44	1.22	325	0.150	6.61	0.038	2.43	0.8	80.8	61	2.5	9.7	3.8	0.2	2
35313	Drill Core	0.5	59	0.19	0.051	23.8	39	1.37	31	0.133	6.27	0.035	2.64	0.6	68.8	54	2.0	11.8	3.7	0.2	3
35314	Drill Core	0.4	62	0.14	0.051	27.6	44	1.25	52	0.175	6.76	0.034	2.83	0.6	72.0	60	2.2	11.9	5.5	0.3	2
35315	Drill Core	0.1	16	1.61	0.005	5.0	7	3.52	28	0.012	0.90	0.013	0.24	<0.1	8.7	11	0.1	10.0	0.4	<0.1	<1
35316	Drill Core	<0.1	14	0.34	0.005	9.5	7	2.94	36	0.023	0.85	0.013	0.31	<0.1	10.9	19	0.2	9.6	0.9	<0.1	<1
35317	Drill Core	0.2	37	0.15	0.022	31.2	31	1.68	175	0.116	4.03	0.025	1.74	0.3	50.3	62	1.2	10.9	4.6	0.3	2
35318	Rock Pulp	7.1	63	1.21	0.030	12.6	64	1.81	37	0.129	5.29	0.126	1.27	1.5	49.4	30	10.9	11.6	3.5	0.2	<1
35319	Drill Core	0.3	47	0.31	0.037	35.9	41	1.46	235	0.172	5.42	0.029	2.09	0.5	66.1	78	1.6	10.4	6.5	0.4	1
35320	Drill Core	0.2	62	0.12	0.045	24.2	51	1.35	255	0.145	6.45	0.033	2.29	0.5	83.9	55	1.9	8.7	3.4	0.2	3
35321	Drill Core	0.2	57	0.70	0.044	36.2	48	1.36	286	0.120	6.40	0.032	2.25	0.7	74.0	70	2.2	10.7	2.5	0.1	3



**BUREAU VERITAS** MINERAL LABORATORIES  
Canada

[www.bureauveritas.com/um](http://www.bureauveritas.com/um)

Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:** **Bul River Mineral Corporation**

Box 845  
Cranbrook British Columbia V1C 4J6 Canada

Project: Bull River

Report Date: October 01, 2019

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# CERTIFICATE OF ANALYSIS

VAN19002638.1

Method Analyte	Unit	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200
		Sc	Li	S	Rb	Hf	In	Re	Se	Te	Tl
MDL		ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		1	0.1	0.1	0.1	0.1	0.05	0.005	1	0.5	0.5
35253	Drill Core	10	22.8	1.5	128.1	2.0	0.15	<0.005	<1	<0.5	1.2
35293	Drill Core	10	38.8	0.9	143.6	2.1	0.09	<0.005	<1	0.9	1.0
35294	Drill Core	10	43.9	0.7	153.3	2.2	0.12	<0.005	<1	0.7	1.0
35295	Rock Pulp	11	30.7	4.1	48.1	1.3	1.13	<0.005	26	<0.5	4.8
35296	Drill Core	9	44.0	2.1	154.2	2.0	0.08	<0.005	<1	0.7	1.1
35297	Drill Core	13	40.0	0.3	173.1	2.8	0.13	<0.005	<1	0.7	1.4
35298	Drill Core	12	37.0	0.6	159.8	2.6	0.20	<0.005	<1	<0.5	1.2
35299	Drill Core	10	35.3	1.4	146.1	2.1	0.11	<0.005	<1	0.7	1.0
35300	Drill Core	9	47.7	4.1	114.0	2.2	0.12	<0.005	2	0.8	0.9
35301	Drill Core	10	45.1	1.0	113.9	2.2	0.11	<0.005	1	<0.5	1.1
35302	Drill Core	11	38.2	1.0	137.7	2.1	0.18	<0.005	1	<0.5	1.1
35303	Drill Core	11	38.3	1.0	113.2	2.3	0.10	<0.005	<1	<0.5	1.0
35304	Drill Core	6	19.1	2.5	58.3	0.9	0.60	<0.005	<1	1.2	<0.5
35305	Rock Pulp	6	1.6	<0.1	28.2	1.6	<0.05	<0.005	<1	<0.5	<0.5
35306	Drill Core	7	28.6	3.8	77.6	1.4	0.25	<0.005	1	0.7	0.8
35307	Drill Core	10	36.2	0.4	108.5	2.5	0.13	<0.005	<1	<0.5	1.2
35308	Drill Core	10	31.0	2.7	138.4	2.2	0.13	<0.005	1	<0.5	1.0
35309	Drill Core	12	35.3	0.6	123.5	2.5	0.14	<0.005	<1	0.6	1.2
35310	Drill Core	10	31.4	1.5	150.4	2.3	0.11	<0.005	<1	<0.5	1.1
35311	Drill Core	11	29.8	0.3	155.6	2.5	0.12	<0.005	<1	0.6	1.3
35312	Drill Core	11	35.5	0.4	131.7	2.6	0.19	<0.005	<1	<0.5	1.2
35313	Drill Core	10	42.6	3.0	129.1	2.3	0.16	<0.005	1	<0.5	0.9
35314	Drill Core	10	41.3	2.3	142.2	2.1	0.15	<0.005	2	<0.5	1.0
35315	Drill Core	3	14.3	0.8	10.0	0.3	1.63	<0.005	<1	0.6	0.5
35316	Drill Core	2	9.3	0.2	16.3	0.3	2.42	<0.005	<1	0.6	0.8
35317	Drill Core	6	21.7	0.3	88.7	1.3	1.60	<0.005	<1	<0.5	0.9
35318	Rock Pulp	11	31.5	4.1	48.0	1.5	1.09	<0.005	25	<0.5	5.0
35319	Drill Core	9	31.9	0.5	113.3	2.0	0.74	<0.005	<1	<0.5	1.0
35320	Drill Core	11	43.6	0.6	102.8	2.5	0.24	<0.005	<1	<0.5	1.1
35321	Drill Core	11	39.1	1.2	139.7	2.1	0.30	<0.005	1	<0.5	1.0



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Canada

www.bureauveritas.com/um

Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:** **Bul River Mineral Corporation**  
Box 845  
Cranbrook British Columbia V1C 4J6 Canada

**Project:** Bull River  
**Report Date:** October 01, 2019

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# CERTIFICATE OF ANALYSIS

VAN19002638.1

Method	WGHT	FA330	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	
Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Sr	Cd	Sb	Bi	Ca	P	Cr	Mg	
Unit	kg	ppb	%	%	%	%	ppm	%	%	%	%	%	%	%	%	%	%	%	%	%	
MDL	0.01	2	0.001	0.001	0.02	0.01	2	0.001	0.001	0.01	0.01	0.02	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01	
35322	Drill Core	1.32	6	<0.001	0.007	<0.02	<0.01	<2	0.004	0.002	0.03	6.94	<0.02	<0.01	<0.001	<0.01	<0.01	0.21	0.06	0.004	1.68
35323	Drill Core	1.06	5	<0.001	0.016	<0.02	<0.01	<2	0.008	0.004	0.09	8.49	<0.02	<0.01	<0.001	<0.01	<0.01	1.71	0.05	0.004	2.14
35271	Drill Core	1.09	5	<0.001	0.004	<0.02	<0.01	<2	0.002	<0.001	0.07	4.69	<0.02	<0.01	<0.001	<0.01	<0.01	1.18	0.03	0.004	1.19
35273	Drill Core	1.25	4	<0.001	0.003	<0.02	<0.01	<2	0.002	<0.001	0.06	4.13	<0.02	<0.01	<0.001	<0.01	<0.01	0.55	0.03	0.004	1.06
35274	Drill Core	1.11	4	<0.001	<0.001	<0.02	<0.01	<2	<0.001	<0.001	0.07	2.99	<0.02	<0.01	<0.001	<0.01	<0.01	0.04	0.02	0.002	0.46
35278	Drill Core	1.13	3	<0.001	0.008	<0.02	<0.01	<2	0.002	0.001	0.05	3.00	<0.02	<0.01	<0.001	<0.01	<0.01	0.06	0.03	0.002	0.52
35279	Rock Pulp	0.11	4	<0.001	0.002	<0.02	<0.01	<2	<0.001	<0.001	0.07	2.60	<0.02	0.02	<0.001	<0.01	<0.01	1.64	0.03	<0.001	0.53
35281	Drill Core	1.13	7	<0.001	0.001	<0.02	<0.01	<2	0.003	0.011	0.51	18.21	<0.02	<0.01	<0.001	<0.01	<0.01	0.11	0.01	0.002	2.32
35282	Drill Core	1.48	3	<0.001	<0.001	<0.02	<0.01	<2	0.001	<0.001	0.08	3.01	<0.02	<0.01	<0.001	<0.01	<0.01	0.04	0.02	0.002	0.45
35283	Drill Core	1.40	6	<0.001	<0.001	<0.02	<0.01	<2	<0.001	0.003	0.08	3.46	<0.02	<0.01	<0.001	<0.01	<0.01	0.05	0.02	0.002	0.59
35286	Drill Core	1.43	6	<0.001	<0.001	<0.02	<0.01	<2	0.002	0.009	0.10	3.66	<0.02	<0.01	<0.001	<0.01	<0.01	0.05	0.01	0.002	0.62
35287	Drill Core	0.88	7	<0.001	0.001	<0.02	<0.01	<2	0.001	<0.001	0.09	4.30	<0.02	<0.01	<0.001	<0.01	<0.01	0.19	0.02	0.003	0.81
35288	Drill Core	0.92	11	<0.001	0.011	<0.02	<0.01	<2	0.004	0.003	0.10	5.63	<0.02	<0.01	<0.001	<0.01	<0.01	0.46	0.03	0.003	0.84
35289	Drill Core	0.91	5	<0.001	0.001	<0.02	<0.01	<2	0.001	0.001	0.07	3.70	<0.02	<0.01	<0.001	<0.01	<0.01	0.09	0.04	0.004	0.78
35290	Drill Core	1.32	6	<0.001	0.003	<0.02	<0.01	<2	0.003	0.001	0.08	4.10	<0.02	<0.01	<0.001	<0.01	<0.01	1.16	0.03	0.004	1.08
35291	Drill Core	0.66	13	0.003	0.005	<0.02	<0.01	<2	0.005	0.004	0.14	5.90	<0.02	<0.01	<0.001	<0.01	<0.01	3.65	0.02	0.002	1.70
35292	Drill Core	1.33	8	<0.001	0.003	<0.02	<0.01	<2	0.003	0.002	0.07	3.97	<0.02	<0.01	<0.001	<0.01	<0.01	1.00	0.02	0.003	0.98
35324	Drill Core	0.71	4	<0.001	0.002	<0.02	<0.01	<2	0.001	<0.001	0.02	3.86	<0.02	<0.01	<0.001	<0.01	<0.01	0.15	0.07	0.004	1.44
35325	Drill Core	0.93	7	<0.001	0.005	<0.02	<0.01	<2	0.002	0.003	0.09	5.18	<0.02	<0.01	<0.001	<0.01	<0.01	0.84	0.06	0.004	1.64
35326	Drill Core	1.60	4	<0.001	0.005	<0.02	<0.01	<2	0.004	0.002	0.02	5.29	<0.02	<0.01	<0.001	<0.01	<0.01	0.15	0.07	0.004	1.62
35327	Rock Pulp	0.11	596	<0.001	3.816	0.26	3.91	74	0.006	0.030	0.08	28.43	<0.02	<0.01	0.011	<0.01	<0.01	0.90	0.01	0.001	2.10
35328	Drill Core	1.10	5	<0.001	0.009	<0.02	<0.01	<2	0.003	0.001	0.05	5.60	<0.02	<0.01	<0.001	<0.01	<0.01	0.50	0.06	0.003	1.42
35329	Drill Core	1.72	4	<0.001	<0.001	<0.02	<0.01	<2	<0.001	<0.001	0.01	3.19	<0.02	<0.01	<0.001	<0.01	<0.01	0.12	0.06	0.004	1.20
35330	Drill Core	1.51	5	<0.001	0.003	<0.02	<0.01	<2	0.003	0.001	0.01	4.79	<0.02	<0.01	<0.001	<0.01	<0.01	0.10	0.05	0.003	1.39
35331	Drill Core	0.31	9	<0.001	0.015	<0.02	<0.01	<2	0.006	0.003	0.39	9.70	<0.02	0.02	<0.001	<0.01	<0.01	4.85	0.01	<0.001	2.35
35332	Drill Core	0.53	7	<0.001	0.013	<0.02	<0.01	<2	0.004	0.002	0.13	6.40	<0.02	0.01	<0.001	<0.01	<0.01	2.98	0.05	0.003	2.28
35333	Rock Pulp	0.11	4	<0.001	0.002	<0.02	<0.01	<2	<0.001	<0.001	0.07	2.60	<0.02	0.02	<0.001	<0.01	<0.01	1.63	0.04	<0.001	0.53
35334	Drill Core	1.57	7	<0.001	0.004	<0.02	<0.01	<2	<0.001	<0.001	0.09	3.03	<0.02	<0.01	<0.001	<0.01	<0.01	2.32	0.04	0.004	1.71



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **Bul River Mineral Corporation**

Box 845

Cranbrook British Columbia V1C 4J6 Canada

Project: Bull River

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# CERTIFICATE OF ANALYSIS

VAN19002638.1

Method	Analyte	MA370	MA370	MA370	MA370	MA370	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200
		Al	Na	K	W	S	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb
Unit		%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL		0.01	0.01	0.01	0.01	0.05	0.1	0.1	0.1	1	0.1	0.2	1	0.01	1	0.1	0.1	1	0.1	0.1	0.1
35322	Drill Core	7.52	0.04	2.94	<0.01	1.53	2.4	69.3	3.7	78	<0.1	35.8	22.6	272	6.38	8	2.8	9.9	11	<0.1	1.6
35323	Drill Core	7.12	0.04	2.84	<0.01	2.67	2.4	147.6	5.2	71	<0.1	70.1	30.3	882	7.82	16	2.7	10.1	46	<0.1	1.9
35271	Drill Core	9.11	0.07	4.67	<0.01	0.65	0.6	39.6	14.0	20	<0.1	21.6	9.0	637	4.27	4	2.3	14.0	36	<0.1	3.9
35273	Drill Core	7.31	0.06	4.83	<0.01	0.52	0.6	26.6	14.2	22	<0.1	17.8	7.0	610	4.32	3	2.7	16.5	25	<0.1	3.9
35274	Drill Core	5.64	0.05	3.42	<0.01	0.09	0.5	6.9	6.3	15	<0.1	8.3	5.3	722	3.16	10	2.1	12.4	9	<0.1	4.0
35278	Drill Core	7.51	0.06	4.43	<0.01	0.47	0.4	83.8	8.2	12	0.1	20.9	12.5	505	3.20	14	2.2	14.3	10	<0.1	3.4
35279	Rock Pulp	7.15	3.56	1.59	<0.01	<0.05	3.8	20.8	2.4	34	<0.1	6.6	4.1	692	2.60	3	1.0	2.6	195	<0.1	0.3
35281	Drill Core	4.60	0.03	2.40	<0.01	0.15	0.3	16.6	4.8	16	<0.1	21.6	103.0	4981	17.45	155	1.1	8.1	8	<0.1	2.9
35282	Drill Core	5.09	0.04	2.99	<0.01	0.07	0.2	8.9	4.4	9	<0.1	7.4	9.0	783	3.08	15	1.7	12.0	7	<0.1	2.1
35283	Drill Core	6.52	0.05	3.72	<0.01	<0.05	0.2	3.1	6.0	10	<0.1	10.2	41.1	834	3.72	58	2.1	13.6	8	<0.1	2.8
35286	Drill Core	5.91	0.04	3.27	<0.01	0.06	0.2	5.5	8.0	12	<0.1	15.9	99.7	1030	3.86	143	1.7	10.9	7	<0.1	2.1
35287	Drill Core	6.86	0.06	4.30	<0.01	0.43	0.3	9.1	11.1	16	<0.1	9.2	4.2	942	4.51	9	2.0	12.6	14	<0.1	4.3
35288	Drill Core	7.33	0.06	4.29	<0.01	2.14	0.6	113.6	11.7	14	0.2	35.5	29.6	936	5.78	22	2.0	11.5	17	<0.1	5.2
35289	Drill Core	9.30	0.07	4.99	<0.01	0.30	0.6	16.8	7.0	17	<0.1	12.4	12.1	629	3.71	16	2.9	12.5	12	<0.1	2.7
35290	Drill Core	8.55	0.07	4.51	<0.01	0.46	0.7	27.9	8.7	20	<0.1	24.0	13.6	701	4.04	33	2.8	13.3	32	<0.1	2.7
35291	Drill Core	6.12	0.05	3.24	<0.01	1.40	33.8	50.0	15.7	18	0.2	47.0	42.1	1359	5.81	81	2.2	9.7	64	0.1	3.4
35292	Drill Core	8.17	0.06	4.48	<0.01	0.96	10.8	35.1	13.2	14	0.2	30.0	19.2	614	3.99	25	2.7	13.1	26	<0.1	3.3
35324	Drill Core	7.53	0.04	3.43	<0.01	0.33	2.5	17.9	2.2	57	<0.1	10.4	6.4	153	3.87	15	1.7	7.2	11	<0.1	1.7
35325	Drill Core	6.99	0.03	3.13	<0.01	1.18	2.2	53.9	4.5	61	<0.1	22.7	32.3	886	5.12	199	2.2	9.9	35	<0.1	2.3
35326	Drill Core	7.66	0.03	3.38	<0.01	1.20	2.9	56.1	4.6	80	<0.1	42.0	27.1	184	5.46	125	2.4	10.3	13	<0.1	2.4
35327	Rock Pulp	1.25	0.08	0.15	<0.01	23.10	9.7	>10000	2650.5	>10000	70.9	56.8	297.7	791	28.30	170	0.9	1.2	7	105.6	20.5
35328	Drill Core	6.86	0.03	3.14	<0.01	1.67	2.0	89.7	6.8	60	<0.1	38.1	16.3	469	5.68	25	2.2	8.8	25	<0.1	2.5
35329	Drill Core	7.14	0.04	3.87	<0.01	0.11	1.5	10.1	1.9	46	<0.1	7.2	2.6	121	3.33	2	2.2	9.1	12	<0.1	1.6
35330	Drill Core	6.83	0.04	3.43	<0.01	1.35	1.1	33.1	4.6	62	<0.1	25.0	12.9	157	4.79	25	2.0	8.1	10	<0.1	2.2
35331	Drill Core	1.39	<0.01	0.14	<0.01	3.52	7.5	162.0	8.6	45	0.2	61.1	34.9	3813	8.73	27	0.8	2.2	145	<0.1	3.9
35332	Drill Core	5.92	0.03	2.52	<0.01	2.11	2.4	142.1	9.9	49	0.1	36.9	25.7	1249	6.49	24	2.7	9.3	98	<0.1	3.7
35333	Rock Pulp	7.18	3.51	1.59	<0.01	<0.05	3.7	20.9	2.4	35	<0.1	7.3	4.6	740	2.64	2	1.0	2.6	197	<0.1	0.2
35334	Drill Core	7.04	0.05	3.68	<0.01	0.56	2.4	38.2	5.1	27	<0.1	8.5	10.8	850	3.07	11	2.6	10.5	77	<0.1	2.5



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:** **Bul River Mineral Corporation**

Box 845

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Project: Bull River

Report Date: October 01, 2019

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# CERTIFICATE OF ANALYSIS

## VAN19002638.1

Method	Analyte	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	
		Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Ce	Sn	Y	Nb	Ta	Be
Unit		ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL		0.1	1	0.01	0.001	0.1	1	0.01	1	0.001	0.01	0.001	0.01	0.1	0.1	1	0.1	0.1	0.1	0.1	1
35322	Drill Core	0.3	60	0.17	0.046	27.6	48	1.55	262	0.117	6.31	0.032	2.22	0.5	78.5	63	1.8	9.4	2.6	0.1	2
35323	Drill Core	0.6	57	1.51	0.046	31.3	44	2.06	63	0.101	6.51	0.031	2.68	0.5	70.3	71	1.8	10.5	2.1	0.1	4
35271	Drill Core	0.6	76	1.03	0.027	34.8	46	1.10	314	0.231	7.77	0.056	2.90	1.7	74.0	78	3.3	9.7	8.1	0.5	3
35273	Drill Core	0.6	74	0.58	0.030	40.1	47	1.06	305	0.252	7.76	0.057	2.80	1.9	80.7	87	3.2	10.0	8.9	0.5	3
35274	Drill Core	0.2	39	0.05	0.019	39.0	27	0.50	229	0.229	6.10	0.047	2.33	1.4	42.0	87	2.3	8.2	8.5	0.5	2
35278	Drill Core	0.5	57	0.06	0.030	49.3	35	0.52	295	0.233	7.82	0.061	2.61	1.5	53.6	108	3.0	8.8	9.4	0.6	3
35279	Rock Pulp	<0.1	33	1.48	0.036	11.9	12	0.51	777	0.184	6.45	3.240	1.53	0.6	50.0	24	1.8	14.7	4.8	0.3	<1
35281	Drill Core	0.3	35	0.10	0.014	39.3	23	2.14	161	0.102	4.34	0.038	2.02	1.0	34.0	87	1.5	9.1	4.2	0.2	1
35282	Drill Core	0.3	31	0.04	0.015	33.6	21	0.47	190	0.162	5.36	0.042	1.96	1.1	30.7	73	2.0	7.1	7.1	0.4	2
35283	Drill Core	0.3	45	0.05	0.019	44.5	32	0.62	268	0.174	7.02	0.051	2.32	1.3	48.7	100	2.5	8.0	7.8	0.5	3
35286	Drill Core	0.5	37	0.05	0.018	40.5	25	0.63	227	0.141	6.06	0.047	2.10	1.1	39.3	90	2.2	7.5	6.3	0.4	2
35287	Drill Core	0.7	56	0.20	0.026	39.1	36	0.81	280	0.238	7.12	0.050	2.55	1.6	62.1	85	3.1	10.5	9.9	0.6	4
35288	Drill Core	1.3	55	0.43	0.027	37.6	35	0.81	102	0.226	6.87	0.052	2.76	1.6	59.9	81	2.8	11.3	8.6	0.6	3
35289	Drill Core	0.8	71	0.08	0.031	35.0	44	0.71	279	0.288	7.95	0.065	3.52	1.9	81.6	84	3.8	10.4	11.8	0.9	4
35290	Drill Core	0.8	71	1.07	0.030	34.5	44	1.00	290	0.218	7.57	0.063	3.70	1.9	80.0	83	3.1	9.6	9.2	0.7	3
35291	Drill Core	1.8	46	3.47	0.025	35.9	28	1.62	212	0.135	5.76	0.048	2.82	1.6	49.9	74	2.1	8.8	5.8	0.4	2
35292	Drill Core	1.2	67	0.92	0.022	39.1	40	0.91	317	0.205	7.39	0.062	3.12	2.1	68.0	84	3.0	7.8	8.2	0.5	2
35324	Drill Core	0.2	63	0.14	0.056	7.1	42	1.31	313	0.136	6.30	0.043	3.01	0.5	75.0	20	2.3	8.0	3.4	0.2	2
35325	Drill Core	0.4	59	0.81	0.059	53.6	42	1.57	322	0.125	6.34	0.036	2.90	0.7	73.6	126	2.2	13.5	3.1	0.2	3
35326	Drill Core	0.4	65	0.15	0.059	37.5	46	1.61	343	0.131	7.20	0.038	2.97	0.6	82.8	95	2.3	10.7	3.1	0.2	2
35327	Rock Pulp	100.2	12	0.89	0.009	8.3	23	2.12	17	0.042	1.27	0.077	0.14	2.1	29.6	17	20.6	4.8	1.4	0.1	<1
35328	Drill Core	0.4	58	0.46	0.056	32.0	43	1.37	109	0.119	6.03	0.037	2.79	0.7	69.1	78	2.0	11.3	2.9	0.2	2
35329	Drill Core	<0.1	70	0.12	0.057	33.0	41	1.18	380	0.161	6.80	0.044	3.59	0.7	88.7	77	2.6	10.3	4.5	0.3	3
35330	Drill Core	0.3	62	0.10	0.044	22.7	42	1.37	323	0.139	6.32	0.038	3.11	0.8	84.0	52	2.2	9.2	3.5	0.2	2
35331	Drill Core	0.5	12	4.67	0.010	12.0	10	2.30	21	0.012	1.37	0.010	0.14	0.3	12.7	27	<0.1	21.6	0.3	<0.1	<1
35332	Drill Core	0.5	47	2.87	0.047	29.1	35	2.28	115	0.112	5.86	0.035	2.49	0.6	65.5	61	1.4	14.5	2.5	0.2	3
35333	Rock Pulp	<0.1	34	1.56	0.034	10.9	12	0.51	769	0.191	6.64	3.455	1.45	0.5	50.5	22	2.0	14.6	5.0	0.3	1
35334	Drill Core	0.2	59	2.22	0.044	35.8	38	1.65	332	0.160	6.80	0.053	2.98	0.8	82.8	74	1.9	13.8	4.2	0.3	2



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Canada

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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:** **Bul River Mineral Corporation**

Box 845

Cranbrook British Columbia V1C 4J6 Canada

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# CERTIFICATE OF ANALYSIS

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Method	Analyte	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200
		Sc	Li	S	Rb	Hf	In	Re	Se	Te	Tl
Unit		ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL		1	0.1	0.1	0.1	0.1	0.05	0.005	1	0.5	0.5
35322	Drill Core	10	46.7	1.4	115.4	2.4	0.17	<0.005	<1	<0.5	1.0
35323	Drill Core	10	38.2	2.5	111.8	2.1	0.12	<0.005	<1	<0.5	1.0
35271	Drill Core	14	23.7	0.6	180.8	2.2	0.11	<0.005	<1	<0.5	1.1
35273	Drill Core	13	24.7	0.4	161.9	2.5	0.12	<0.005	1	<0.5	1.5
35274	Drill Core	9	11.2	<0.1	135.5	1.4	0.12	<0.005	<1	<0.5	1.3
35278	Drill Core	12	14.3	0.5	151.8	1.8	0.11	<0.005	<1	<0.5	1.3
35279	Rock Pulp	6	1.7	<0.1	28.8	1.5	<0.05	<0.005	<1	<0.5	<0.5
35281	Drill Core	12	9.8	0.1	116.9	0.9	1.23	<0.005	<1	0.5	0.9
35282	Drill Core	8	9.3	<0.1	125.7	1.0	0.10	<0.005	<1	<0.5	0.9
35283	Drill Core	10	11.9	<0.1	148.5	1.6	0.14	<0.005	<1	<0.5	1.1
35286	Drill Core	8	11.2	<0.1	138.6	1.2	0.19	<0.005	<1	<0.5	1.0
35287	Drill Core	12	16.2	0.4	160.5	1.9	0.14	<0.005	<1	<0.5	1.1
35288	Drill Core	11	19.1	2.1	159.7	1.8	0.11	<0.005	<1	<0.5	1.2
35289	Drill Core	14	19.3	0.3	192.7	2.6	0.13	<0.005	<1	<0.5	1.4
35290	Drill Core	14	18.7	0.6	190.3	2.5	0.11	<0.005	<1	<0.5	1.3
35291	Drill Core	10	13.4	1.4	150.2	1.7	0.09	<0.005	1	0.7	1.1
35292	Drill Core	12	16.0	1.0	174.2	2.1	0.14	<0.005	<1	<0.5	1.0
35324	Drill Core	10	37.0	0.3	129.2	2.2	0.13	<0.005	<1	<0.5	1.2
35325	Drill Core	11	36.6	1.2	140.0	2.3	0.16	<0.005	1	<0.5	1.2
35326	Drill Core	11	42.3	1.2	153.8	2.3	0.13	<0.005	1	<0.5	1.3
35327	Rock Pulp	2	7.3	>10	4.4	0.8	6.88	<0.005	12	<0.5	5.3
35328	Drill Core	10	42.5	1.7	142.9	1.9	0.16	<0.005	2	<0.5	1.1
35329	Drill Core	11	40.7	0.1	156.8	2.3	0.13	<0.005	<1	<0.5	1.2
35330	Drill Core	11	40.3	1.3	141.6	2.4	0.20	<0.005	<1	<0.5	1.2
35331	Drill Core	3	19.7	3.5	5.4	0.3	0.21	<0.005	1	1.6	<0.5
35332	Drill Core	9	43.3	2.1	120.9	2.5	0.10	<0.005	2	<0.5	1.0
35333	Rock Pulp	6	1.6	<0.1	29.1	1.6	<0.05	<0.005	<1	<0.5	<0.5
35334	Drill Core	11	32.9	0.6	152.0	2.4	0.15	<0.005	1	<0.5	1.1



# QUALITY CONTROL REPORT

VAN19002638.1

Method	WGHT	FA330	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370
Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Sr	Cd	Sb	Bi	Ca	P	Cr	Mg	
Unit	kg	ppb	%	%	%	%	ppm	%	%	%	%	%	%	%	%	%	%	%	%	%	
MDL	0.01	2	0.001	0.001	0.02	0.01	2	0.001	0.001	0.01	0.01	0.02	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01	
Pulp Duplicates																					
27234	Drill Core	5.28	4	<0.001	0.007	<0.02	<0.01	<2	0.001	0.001	0.12	3.26	<0.02	<0.01	<0.001	<0.01	<0.01	2.39	0.05	0.003	1.43
REP 27234	QC																				
27263	Drill Core	3.38	6	<0.001	0.004	<0.02	<0.01	<2	0.002	0.001	0.30	5.84	<0.02	<0.01	<0.001	<0.01	<0.01	2.37	0.04	0.003	2.02
REP 27263	QC			<0.001	0.004	<0.02	<0.01	<2	0.002	0.001	0.29	5.82	<0.02	<0.01	<0.001	<0.01	<0.01	2.35	0.04	0.003	2.01
27264	Drill Core	3.26	5	<0.001	0.008	<0.02	<0.01	<2	0.001	0.001	0.10	4.40	<0.02	<0.01	<0.001	<0.01	<0.01	2.16	0.04	0.003	1.60
REP 27264	QC		5																		
27276	Drill Core	3.21	8	<0.001	<0.001	<0.02	0.01	<2	<0.001	0.001	0.19	10.33	<0.02	<0.01	<0.001	<0.01	<0.01	2.04	0.02	0.001	3.03
REP 27276	QC																				
27298	Drill Core	5.25	11	<0.001	0.007	<0.02	<0.01	<2	0.001	0.001	0.08	5.08	<0.02	<0.01	<0.001	<0.01	<0.01	0.64	0.05	0.003	1.45
REP 27298	QC		4	<0.001	0.007	<0.02	<0.01	<2	0.002	0.002	0.08	5.32	<0.02	<0.01	<0.001	<0.01	<0.01	0.67	0.05	0.003	1.50
35300	Drill Core	0.56	33	0.002	0.013	<0.02	<0.01	<2	0.009	0.007	0.04	9.05	<0.02	<0.01	<0.001	<0.01	<0.01	0.75	0.06	0.003	1.68
REP 35300	QC																				
35322	Drill Core	1.32	6	<0.001	0.007	<0.02	<0.01	<2	0.004	0.002	0.03	6.94	<0.02	<0.01	<0.001	<0.01	<0.01	0.21	0.06	0.004	1.68
REP 35322	QC		5	<0.001	0.007	<0.02	<0.01	<2	0.004	0.002	0.03	6.94	<0.02	<0.01	<0.001	<0.01	<0.01	0.21	0.05	0.005	1.66
35289	Drill Core	0.91	5	<0.001	0.001	<0.02	<0.01	<2	0.001	0.001	0.07	3.70	<0.02	<0.01	<0.001	<0.01	<0.01	0.09	0.04	0.004	0.78
REP 35289	QC																				
35329	Drill Core	1.72	4	<0.001	<0.001	<0.02	<0.01	<2	<0.001	<0.001	0.01	3.19	<0.02	<0.01	<0.001	<0.01	<0.01	0.12	0.06	0.004	1.20
REP 35329	QC		3																		
35333	Rock Pulp	0.11	4	<0.001	0.002	<0.02	<0.01	<2	<0.001	<0.001	0.07	2.60	<0.02	0.02	<0.001	<0.01	<0.01	1.63	0.04	<0.001	0.53
REP 35333	QC			<0.001	0.002	<0.02	<0.01	<2	<0.001	<0.001	0.07	2.59	<0.02	0.02	<0.001	<0.01	<0.01	1.65	0.04	<0.001	0.53
Core Reject Duplicates																					
27236	Drill Core	5.40	3	<0.001	0.006	<0.02	<0.01	<2	0.001	0.001	0.11	3.41	<0.02	<0.01	<0.001	<0.01	<0.01	1.96	0.04	0.003	1.31
DUP 27236	QC		3	<0.001	0.007	<0.02	<0.01	<2	0.001	0.001	0.11	3.52	<0.02	<0.01	<0.001	<0.01	<0.01	2.00	0.04	0.002	1.34
27279	Drill Core	2.82	3	<0.001	0.003	<0.02	<0.01	<2	<0.001	<0.001	0.50	5.27	<0.02	0.02	<0.001	<0.01	<0.01	9.11	<0.01	<0.001	3.14
DUP 27279	QC		4	<0.001	0.005	<0.02	<0.01	<2	<0.001	<0.001	0.54	5.69	<0.02	0.02	<0.001	<0.01	<0.01	9.72	<0.01	<0.001	3.35
35302	Drill Core	1.04	4	<0.001	0.007	<0.02	<0.01	<2	0.003	0.002	0.02	5.34	<0.02	<0.01	<0.001	<0.01	<0.01	0.17	0.07	0.005	1.32
DUP 35302	QC		4	<0.001	0.006	<0.02	<0.01	<2	0.003	0.002	0.02	5.39	<0.02	<0.01	<0.001	<0.01	<0.01	0.17	0.07	0.005	1.34
35290	Drill Core	1.32	6	<0.001	0.003	<0.02	<0.01	<2	0.003	0.001	0.08	4.10	<0.02	<0.01	<0.001	<0.01	<0.01	1.16	0.03	0.004	1.08



Bureau Veritas Commodities Canada Ltd.  
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada  
PHONE (604) 253-3158

**Client:** Bul River Mineral Corporation  
Box 845  
Cranbrook British Columbia V1C 4J6 Canada

**Project:** Bull River  
**Report Date:** October 01, 2019

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# QUALITY CONTROL REPORT

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Method	Analyte	MA370	MA370	MA370	MA370	MA370	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	
		Al	Na	K	W	S	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb
Unit		%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
MDL		0.01	0.01	0.01	0.01	0.05	0.1	0.1	0.1	1	0.1	0.1	0.2	1	0.01	1	0.1	0.1	0.1	1	0.1
Pulp Duplicates																					
27234	Drill Core	6.97	0.05	3.86	<0.01	0.72	1.3	71.2	8.5	18	0.1	12.6	11.8	1191	3.28	19	1.8	8.8	31	<0.1	1.3
REP 27234	QC						1.3	68.6	8.5	18	0.1	11.7	11.4	1211	3.30	17	1.8	9.2	31	<0.1	1.2
27263	Drill Core	5.59	0.03	2.45	<0.01	0.78	3.0	43.8	4.0	42	<0.1	16.2	12.6	2993	5.74	33	1.6	8.1	39	<0.1	1.3
REP 27263	QC	5.52	0.03	2.45	<0.01	0.73															
27264	Drill Core	5.96	0.04	2.80	<0.01	1.04	1.6	82.6	7.8	29	0.1	14.9	13.0	987	4.42	11	1.7	9.6	26	<0.1	1.2
REP 27264	QC																				
27276	Drill Core	4.09	<0.01	0.01	<0.01	0.10	1.9	7.4	2.4	109	<0.1	6.7	13.9	1725	9.00	167	1.2	6.2	33	<0.1	0.6
REP 27276	QC						1.5	7.0	2.1	104	<0.1	6.8	12.8	1702	8.86	156	1.1	5.5	32	<0.1	0.6
27298	Drill Core	7.25	0.05	3.29	<0.01	0.80	2.3	70.0	4.8	41	<0.1	14.0	13.9	790	4.80	16	2.1	9.0	14	<0.1	1.5
REP 27298	QC	7.40	0.05	3.40	<0.01	0.83															
35300	Drill Core	6.78	0.04	2.65	<0.01	4.66	15.5	122.4	35.1	65	0.3	78.6	66.7	377	7.94	130	2.5	10.4	26	<0.1	12.0
REP 35300	QC						15.1	120.7	33.3	63	0.3	75.1	64.9	374	8.01	127	2.5	9.6	26	<0.1	11.0
35322	Drill Core	7.52	0.04	2.94	<0.01	1.53	2.4	69.3	3.7	78	<0.1	35.8	22.6	272	6.38	8	2.8	9.9	11	<0.1	1.6
REP 35322	QC	7.48	0.04	2.94	<0.01	1.52															
35289	Drill Core	9.30	0.07	4.99	<0.01	0.30	0.6	16.8	7.0	17	<0.1	12.4	12.1	629	3.71	16	2.9	12.5	12	<0.1	2.7
REP 35289	QC						0.7	15.7	6.9	16	<0.1	12.0	11.4	614	3.66	17	2.9	12.4	12	<0.1	2.8
35329	Drill Core	7.14	0.04	3.87	<0.01	0.11	1.5	10.1	1.9	46	<0.1	7.2	2.6	121	3.33	2	2.2	9.1	12	<0.1	1.6
REP 35329	QC																				
35333	Rock Pulp	7.18	3.51	1.59	<0.01	<0.05	3.7	20.9	2.4	35	<0.1	7.3	4.6	740	2.64	2	1.0	2.6	197	<0.1	0.2
REP 35333	QC	7.13	3.49	1.59	<0.01	<0.05															
Core Reject Duplicates																					
27236	Drill Core	6.28	0.04	3.26	<0.01	0.51	0.8	67.7	4.1	20	0.1	10.4	12.3	1139	3.51	31	1.7	8.2	24	<0.1	1.0
DUP 27236	QC	6.37	0.04	3.30	<0.01	0.55	0.8	69.1	4.1	18	0.1	11.0	11.7	1160	3.60	32	1.8	8.0	24	<0.1	1.1
27279	Drill Core	0.10	0.02	0.04	<0.01	0.17	0.2	35.3	3.9	17	<0.1	1.4	1.4	4879	4.75	3	<0.1	0.2	140	0.1	0.3
DUP 27279	QC	0.11	0.02	0.05	<0.01	0.23	0.1	44.5	3.7	14	<0.1	1.8	1.9	5286	5.09	2	<0.1	0.1	150	0.1	0.3
35302	Drill Core	7.80	0.05	3.43	<0.01	1.16	1.3	63.1	4.4	54	<0.1	27.2	20.2	167	4.79	94	2.3	9.4	10	<0.1	2.0
DUP 35302	QC	7.87	0.05	3.46	<0.01	1.16	1.3	55.1	4.2	54	<0.1	27.9	19.9	172	4.85	93	2.4	9.1	10	<0.1	2.0
35290	Drill Core	8.55	0.07	4.51	<0.01	0.46	0.7	27.9	8.7	20	<0.1	24.0	13.6	701	4.04	33	2.8	13.3	32	<0.1	2.7





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Method	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200
Analyte	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Ce	Sn	Y	Nb	Ta	Be	
Unit	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
MDL	0.1	1	0.01	0.001	0.1	1	0.01	1	0.001	0.01	0.001	0.01	0.1	0.1	1	0.1	0.1	0.1	0.1	0.1	
Pulp Duplicates																					
27234	Drill Core	0.9	53	2.47	0.051	29.4	30	1.41	189	0.134	6.98	0.056	3.52	0.8	69.2	63	2.9	13.2	3.3	0.2	7
REP 27234	QC	1.0	53	2.50	0.052	31.9	29	1.43	235	0.132	7.22	0.058	3.74	0.7	70.9	68	2.7	13.5	3.2	0.2	6
27263	Drill Core	0.4	45	2.60	0.039	52.3	28	2.04	312	0.097	5.73	0.037	2.47	0.6	61.0	100	1.9	12.1	4.4	0.2	3
REP 27263	QC																				
27264	Drill Core	1.1	45	2.34	0.037	41.8	29	1.61	127	0.102	6.06	0.041	2.67	0.6	61.6	87	1.8	10.8	3.0	0.1	3
REP 27264	QC																				
27276	Drill Core	0.1	26	1.87	0.021	29.6	15	2.88	8	0.028	3.98	0.008	0.01	<0.1	22.6	59	<0.1	8.0	0.9	<0.1	<1
REP 27276	QC	0.1	25	1.84	0.020	28.6	14	2.83	7	0.028	3.92	0.008	0.01	<0.1	22.3	58	<0.1	7.6	0.9	<0.1	<1
27298	Drill Core	0.7	54	0.56	0.043	24.5	34	1.41	253	0.122	6.20	0.044	3.32	0.8	65.8	48	2.7	8.6	5.7	0.3	4
REP 27298	QC																				
35300	Drill Core	2.6	55	0.61	0.050	38.5	33	1.52	33	0.095	5.63	0.038	2.27	0.5	70.7	84	2.1	10.9	2.2	0.1	3
REP 35300	QC	2.5	56	0.62	0.048	37.8	33	1.54	33	0.094	5.74	0.038	2.27	0.6	65.8	84	1.9	10.8	2.0	0.1	2
35322	Drill Core	0.3	60	0.17	0.046	27.6	48	1.55	262	0.117	6.31	0.032	2.22	0.5	78.5	63	1.8	9.4	2.6	0.1	2
REP 35322	QC																				
35289	Drill Core	0.8	71	0.08	0.031	35.0	44	0.71	279	0.288	7.95	0.065	3.52	1.9	81.6	84	3.8	10.4	11.8	0.9	4
REP 35289	QC	0.9	69	0.09	0.032	36.3	40	0.71	283	0.282	7.98	0.063	3.42	2.0	84.9	90	3.5	10.7	12.0	0.8	4
35329	Drill Core	<0.1	70	0.12	0.057	33.0	41	1.18	380	0.161	6.80	0.044	3.59	0.7	88.7	77	2.6	10.3	4.5	0.3	3
REP 35329	QC																				
35333	Rock Pulp	<0.1	34	1.56	0.034	10.9	12	0.51	769	0.191	6.64	3.455	1.45	0.5	50.5	22	2.0	14.6	5.0	0.3	1
REP 35333	QC																				
Core Reject Duplicates																					
27236	Drill Core	0.5	48	2.07	0.041	24.1	27	1.34	589	0.145	6.46	0.047	3.04	0.8	68.3	45	2.6	12.2	6.0	0.3	3
DUP 27236	QC	0.5	48	2.07	0.041	22.3	28	1.36	423	0.142	6.41	0.044	2.99	0.7	66.4	42	2.4	11.9	5.6	0.3	4
27279	Drill Core	<0.1	2	8.41	<0.001	2.2	2	2.99	20	0.001	0.10	0.017	0.04	<0.1	0.3	5	0.2	14.1	<0.1	<0.1	<1
DUP 27279	QC	<0.1	2	8.92	<0.001	1.5	2	3.27	22	0.001	0.12	0.018	0.05	<0.1	0.3	4	<0.1	14.0	<0.1	<0.1	<1
35302	Drill Core	0.7	66	0.14	0.063	23.7	46	1.21	308	0.138	6.43	0.037	2.46	0.8	72.8	53	2.2	9.8	3.1	0.2	2
DUP 35302	QC	0.6	67	0.14	0.060	22.1	46	1.23	300	0.145	6.51	0.039	2.17	0.8	74.2	49	2.3	9.4	3.2	0.2	3
35290	Drill Core	0.8	71	1.07	0.030	34.5	44	1.00	290	0.218	7.57	0.063	3.70	1.9	80.0	83	3.1	9.6	9.2	0.7	3



# QUALITY CONTROL REPORT

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Method	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200
Analyte	Sc	Li	S	Rb	Hf	In	Re	Se	Te	Tl	
Unit	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL	1	0.1	0.1	0.1	0.1	0.05	0.005	1	0.5	0.5	
Pulp Duplicates											
27234	Drill Core	10	21.5	0.7	140.3	2.1	0.19	<0.005	<1	<0.5	1.6
REP 27234	QC	11	21.7	0.7	151.6	1.9	0.12	0.005	<1	<0.5	1.7
27263	Drill Core	9	21.4	0.7	103.2	1.6	0.17	<0.005	<1	0.6	1.1
REP 27263	QC										
27264	Drill Core	9	23.0	1.0	119.3	1.9	0.17	<0.005	<1	0.7	1.2
REP 27264	QC										
27276	Drill Core	5	27.3	<0.1	1.3	0.8	0.19	<0.005	<1	0.9	<0.5
REP 27276	QC	5	27.8	<0.1	1.0	0.7	0.18	<0.005	<1	1.0	<0.5
27298	Drill Core	10	25.3	0.7	115.7	1.9	0.21	<0.005	<1	<0.5	1.3
REP 27298	QC										
35300	Drill Core	9	47.7	4.1	114.0	2.2	0.12	<0.005	2	0.8	0.9
REP 35300	QC	9	48.6	4.1	107.3	1.9	0.12	<0.005	1	<0.5	0.8
35322	Drill Core	10	46.7	1.4	115.4	2.4	0.17	<0.005	<1	<0.5	1.0
REP 35322	QC										
35289	Drill Core	14	19.3	0.3	192.7	2.6	0.13	<0.005	<1	<0.5	1.4
REP 35289	QC	14	19.4	0.4	181.2	2.6	0.12	<0.005	<1	<0.5	1.3
35329	Drill Core	11	40.7	0.1	156.8	2.3	0.13	<0.005	<1	<0.5	1.2
REP 35329	QC										
35333	Rock Pulp	6	1.6	<0.1	29.1	1.6	<0.05	<0.005	<1	<0.5	<0.5
REP 35333	QC										
Core Reject Duplicates											
27236	Drill Core	9	22.0	0.5	138.3	2.1	0.21	<0.005	<1	0.7	1.3
DUP 27236	QC	9	23.0	0.5	143.1	2.0	0.15	<0.005	<1	<0.5	1.4
27279	Drill Core	8	1.2	0.1	1.8	<0.1	0.15	<0.005	<1	0.5	<0.5
DUP 27279	QC	9	1.5	0.2	2.0	<0.1	0.17	<0.005	<1	2.1	<0.5
35302	Drill Core	11	38.2	1.0	137.7	2.1	0.18	<0.005	1	<0.5	1.1
DUP 35302	QC	11	37.0	1.0	122.1	2.3	0.17	<0.005	<1	<0.5	1.2
35290	Drill Core	14	18.7	0.6	190.3	2.5	0.11	<0.005	<1	<0.5	1.3



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **Bul River Mineral Corporation**

Box 845

Cranbrook British Columbia V1C 4J6 Canada

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# QUALITY CONTROL REPORT

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		WGHT	FA330	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370
		Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Sr	Cd	Sb	Bi	Ca	P	Cr	Mg
		kg	ppb	%	%	%	%	ppm	%	%	%	%	%	%	%	%	%	%	%	%	%
		0.01	2	0.001	0.001	0.02	0.01	2	0.001	0.001	0.01	0.01	0.02	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01
DUP 35290	QC		5	<0.001	0.003	<0.02	<0.01	<2	0.003	0.001	0.08	4.15	<0.02	<0.01	<0.001	<0.01	<0.01	1.14	0.03	0.004	1.07
Reference Materials																					
STD CDN-ME-14	Standard			0.002	1.221	0.49	3.07	45	0.002	0.017	0.09	17.40	<0.02	<0.01	0.009	<0.01	<0.01	0.73	0.02	0.001	1.27
STD CDN-ME-9	Standard			<0.001	0.672	<0.02	0.01	4	0.958	0.018	0.12	13.78	<0.02	0.03	<0.001	<0.01	<0.01	4.18	0.06	0.028	4.12
STD CDN-ME-14	Standard			<0.001	1.236	0.50	3.17	44	0.002	0.016	0.09	17.36	<0.02	<0.01	0.009	<0.01	<0.01	0.74	0.02	0.001	1.27
STD CDN-ME-14	Standard			0.002	1.221	0.51	3.17	43	0.002	0.018	0.09	17.72	<0.02	<0.01	0.009	<0.01	<0.01	0.76	0.02	0.001	1.25
STD CDN-ME-9	Standard			<0.001	0.669	<0.02	0.01	4	0.901	0.018	0.13	14.01	<0.02	0.03	<0.001	<0.01	<0.01	4.35	0.07	0.030	4.00
STD CDN-ME-14	Standard			0.002	1.238	0.52	3.24	44	0.002	0.018	0.09	18.10	<0.02	<0.01	0.010	<0.01	0.01	0.79	0.02	0.001	1.29
STD OREAS131B	Standard			<0.001	0.021	1.82	3.11	33	0.002	0.002	0.17	5.24	<0.02	<0.01	0.009	<0.01	<0.01	5.25	0.06	0.002	3.11
STD OREAS131B	Standard			<0.001	0.022	1.90	3.11	33	0.003	0.002	0.18	5.76	<0.02	<0.01	0.009	<0.01	<0.01	5.39	0.06	0.002	3.12
STD OREAS25A-4A	Standard																				
STD OREAS25A-4A	Standard																				
STD OREAS25A-4A	Standard																				
STD OREAS25A-4A	Standard																				
STD OREAS25A-4A	Standard																				
STD OREAS45H	Standard																				
STD OREAS45H	Standard																				
STD OREAS45E	Standard																				
STD OREAS45E	Standard																				
STD OREAS45E	Standard																				
STD OREAS45E	Standard																				
STD OXI138	Standard		1832																		
STD OXI138	Standard		1840																		
STD OXI138	Standard		1864																		
STD OXI138	Standard		1950																		
STD OXI138	Standard		1831																		
STD OXI138	Standard		1913																		
STD OXI138	Standard		1805																		
STD OXI138	Standard		1873																		
STD OXI138 Expected			1860																		









Bureau Veritas Commodities Canada Ltd.  
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada  
PHONE (604) 253-3158

**Client:** **Bul River Mineral Corporation**  
Box 845  
Cranbrook British Columbia V1C 4J6 Canada

Project: Bull River  
Report Date: October 01, 2019

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# QUALITY CONTROL REPORT

VAN19002638.1

	WGHT	FA330	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370
	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Sr	Cd	Sb	Bi	Ca	P	Cr	Mg
	kg	ppb	%	%	%	%	ppm	%	%	%	%	%	%	%	%	%	%	%	%	%
	0.01	2	0.001	0.001	0.02	0.01	2	0.001	0.001	0.01	0.01	0.02	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01
STD CDN-ME-9 Expected				0.654		0.012		0.93	0.0169	0.121	13.84		0.03				4.21	0.06	0.0284	4.05
STD CDN-ME-14 Expected				1.221	0.495	3.17	43.5	0.002	0.0172	0.0883	18.04	0.0088		0.0088		0.0094	0.747	0.0147	0.0014	1.28
STD OREAS131B Expected			0.0003	0.0216	1.86	3.14	33.3	0.0025	0.00181	0.1771	5.705	0.0072	0.0026	0.0089	0.005		5.37	0.0536	0.0027	3.128
STD OREAS45H Expected																				
STD OREAS25A-4A Expected																				
STD OREAS45E Expected																				
BLK	Blank		3																	
BLK	Blank		<0.001	<0.001	<0.02	<0.01	<2	<0.001	<0.001	<0.01	<0.01	<0.02	<0.01	<0.001	<0.01	<0.01	<0.01	<0.01	<0.001	<0.01
BLK	Blank		<0.001	<0.001	<0.02	<0.01	<2	<0.001	<0.001	<0.01	<0.01	<0.02	<0.01	<0.001	<0.01	<0.01	<0.01	<0.01	<0.001	<0.01
BLK	Blank		3																	
BLK	Blank		3																	
BLK	Blank		3																	
BLK	Blank		<0.001	<0.001	<0.02	<0.01	<2	<0.001	<0.001	<0.01	<0.01	<0.02	<0.01	<0.001	<0.01	<0.01	<0.01	<0.01	<0.001	<0.01
BLK	Blank		<0.001	<0.001	<0.02	<0.01	<2	<0.001	<0.001	<0.01	<0.01	<0.02	<0.01	<0.001	<0.01	<0.01	<0.01	<0.01	<0.001	<0.01
BLK	Blank																			
BLK	Blank																			
BLK	Blank																			
BLK	Blank																			
Prep Wash																				
ROCK-VAN	Prep Blank	3	<0.001	<0.001	<0.02	<0.01	<2	<0.001	<0.001	0.06	2.14	<0.02	0.02	<0.001	<0.01	<0.01	1.46	0.04	<0.001	0.51
ROCK-VAN	Prep Blank	4	<0.001	<0.001	<0.02	<0.01	<2	<0.001	<0.001	0.06	2.18	<0.02	0.02	<0.001	<0.01	<0.01	1.50	0.04	<0.001	0.54



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **Bul River Mineral Corporation**

Box 845

Cranbrook British Columbia V1C 4J6 Canada

Project: Bull River

Report Date: October 01, 2019

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# QUALITY CONTROL REPORT

VAN19002638.1

		MA370	MA370	MA370	MA370	MA370	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200		
		Al	Na	K	W	S	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb	
		%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	
		0.01	0.01	0.01	0.01	0.05	0.1	0.1	0.1	1	0.1	0.1	0.2	1	0.01	1	0.1	0.1	0.1	1	0.1	0.1
STD CDN-ME-9 Expected		6.74	1.86	0.616		2.58																
STD CDN-ME-14 Expected		4.47	0.53	1.7		16.14																
STD OREAS131B Expected		4.57	0.139	3.34		5.01																
STD OREAS45H Expected							1.55	767	11.9	39.7	0.147	423	88	380	19.52	16.9	1.68	7.26	27.1		0.63	
STD OREAS25A-4A Expected							2.41	33.9	25.2	44.4		45.8	7.7	480	6.6	9.94	2.94	15.8	48.5		0.65	
STD OREAS45E Expected							2.4	780	18.2	46.7	0.311	454	57	570	24.12	16.3	2.41	12.9	15.9	0.06	1	
BLK	Blank																					
BLK	Blank	<0.01	<0.01	<0.01	<0.01	<0.05																
BLK	Blank	<0.01	<0.01	<0.01	<0.01	<0.05																
BLK	Blank																					
BLK	Blank																					
BLK	Blank																					
BLK	Blank	<0.01	<0.01	<0.01	<0.01	<0.05																
BLK	Blank	<0.01	<0.01	<0.01	<0.01	<0.05																
BLK	Blank						<0.1	<0.1	<0.1	<1	<0.1	0.2	<0.2	<1	<0.01	<1	<0.1	<0.1	<1	<0.1	<0.1	
BLK	Blank						<0.1	0.2	<0.1	2	<0.1	0.2	<0.2	<1	<0.01	<1	<0.1	<0.1	<1	<0.1	<0.1	
BLK	Blank						<0.1	0.2	<0.1	<1	<0.1	0.2	<0.2	<1	<0.01	<1	<0.1	<0.1	<1	<0.1	<0.1	
BLK	Blank						<0.1	<0.1	<0.1	<1	<0.1	0.3	<0.2	<1	<0.01	<1	<0.1	<0.1	<1	<0.1	<0.1	
BLK	Blank						<0.1	0.3	<0.1	<1	<0.1	0.2	<0.2	1	<0.01	<1	<0.1	<0.1	<1	<0.1	<0.1	
Prep Wash																						
ROCK-VAN	Prep Blank	6.85	3.30	1.66	<0.01	<0.05	1.1	3.8	3.3	46	<0.1	1.1	3.5	619	2.14	2	1.2	3.0	205	<0.1	0.2	
ROCK-VAN	Prep Blank	6.67	3.28	1.65	<0.01	<0.05	0.9	5.5	3.6	60	<0.1	1.2	3.9	657	2.12	2	1.1	3.0	203	0.1	0.2	





Bureau Veritas Commodities Canada Ltd.  
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada  
PHONE (604) 253-3158

**Client:** **Bul River Mineral Corporation**  
Box 845  
Cranbrook British Columbia V1C 4J6 Canada

**Project:** Bull River  
**Report Date:** October 01, 2019

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# QUALITY CONTROL REPORT

VAN19002638.1

		MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200		
		Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Ce	Sn	Y	Nb	Ta	Be	
		ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
		0.1	1	0.01	0.001	0.1	1	0.01	1	0.001	0.01	0.001	0.01	0.1	0.1	1	0.1	0.1	0.1	0.1	1	
STD CDN-ME-9 Expected																						
STD CDN-ME-14 Expected																						
STD OREAS131B Expected																						
STD OREAS45H Expected		0.17	263	0.135	0.023	12.4	602	0.238	332	0.878	7.99	0.09	0.205	0.99	131	23.6	1.93	10.4	14.8	1.08	1.09	
STD OREAS25A-4A Expected		0.37	157	0.301	0.048	21.8	115	0.327	147	0.93	8.87	0.131	0.482	2	155	47.3	4.06	10.5	20.9	1.4	0.93	
STD OREAS45E Expected		0.28	322	0.065	0.034	11	979	0.156	252	0.559	6.78	0.059	0.324	1.07	97	23.5	1.32	8.28	6.8	0.54		
BLK	Blank																					
BLK	Blank																					
BLK	Blank																					
BLK	Blank																					
BLK	Blank																					
BLK	Blank																					
BLK	Blank																					
BLK	Blank																					
BLK	Blank	<0.1	<1	<0.01	<0.001	<0.1	<1	<0.01	<1	<0.001	<0.01	0.002	<0.01	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<1	
BLK	Blank	<0.1	<1	<0.01	<0.001	<0.1	<1	<0.01	<1	<0.001	<0.01	0.001	<0.01	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<1	
BLK	Blank	<0.1	<1	<0.01	<0.001	<0.1	<1	<0.01	<1	<0.001	<0.01	0.001	<0.01	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<1	
BLK	Blank	<0.1	<1	<0.01	<0.001	<0.1	<1	<0.01	<1	<0.001	<0.01	0.001	<0.01	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<1	
BLK	Blank	<0.1	<1	<0.01	<0.001	<0.1	<1	<0.01	<1	<0.001	<0.01	0.002	<0.01	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<1	
Prep Wash																						
ROCK-VAN	Prep Blank	<0.1	32	1.49	0.042	12.3	3	0.49	771	0.198	6.96	3.289	1.59	0.2	49.2	24	0.5	15.5	5.2	0.4	<1	
ROCK-VAN	Prep Blank	<0.1	33	1.54	0.043	11.5	3	0.52	805	0.199	6.79	3.388	1.58	0.3	49.1	23	0.6	15.3	5.3	0.4	<1	



Bureau Veritas Commodities Canada Ltd.  
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada  
PHONE (604) 253-3158

**Client:** **Bul River Mineral Corporation**  
Box 845  
Cranbrook British Columbia V1C 4J6 Canada

Project: Bull River  
Report Date: October 01, 2019

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# QUALITY CONTROL REPORT

VAN19002638.1

		MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	
		Sc	Li	S	Rb	Hf	In	Re	Se	Te	Tl
		ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		1	0.1	0.1	0.1	0.1	0.05	0.005	1	0.5	0.5
STD CDN-ME-9 Expected											
STD CDN-ME-14 Expected											
STD OREAS131B Expected											
STD OREAS45H Expected		57	13.1		22.5	3.6	0.1		2.02		
STD OREAS25A-4A Expected		13.7	36.7	0.047	61	4.14	0.09		2.4		0.35
STD OREAS45E Expected		93	6.58	0.046	21.2	3.11	0.099		2.97	0.1	0.15
BLK	Blank										
BLK	Blank										
BLK	Blank										
BLK	Blank										
BLK	Blank										
BLK	Blank										
BLK	Blank										
BLK	Blank										
BLK	Blank	<1	<0.1	<0.1	0.3	<0.1	<0.05	<0.005	1	<0.5	<0.5
BLK	Blank	<1	<0.1	<0.1	0.5	<0.1	<0.05	<0.005	<1	<0.5	<0.5
BLK	Blank	<1	<0.1	<0.1	0.3	<0.1	<0.05	<0.005	<1	<0.5	<0.5
BLK	Blank	<1	0.1	<0.1	0.2	<0.1	<0.05	<0.005	2	<0.5	<0.5
BLK	Blank	<1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.005	<1	<0.5	<0.5
Prep Wash											
ROCK-VAN	Prep Blank	6	3.6	<0.1	39.3	1.5	<0.05	<0.005	<1	<0.5	<0.5
ROCK-VAN	Prep Blank	6	4.0	<0.1	36.9	1.6	<0.05	<0.005	<1	<0.5	<0.5



Bureau Veritas Commodities Canada Ltd.  
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada  
PHONE (604) 253-3158

**Client:** **Bul River Mineral Corporation**  
Box 845  
Cranbrook British Columbia V1C 4J6 Canada

Submitted By: Jill Christmann  
Receiving Lab: Canada-Vancouver  
Received: October 24, 2019  
Report Date: November 09, 2019  
Page: 1 of 2

# CERTIFICATE OF ANALYSIS

VAN19003198.1

## CLIENT JOB INFORMATION

Project: Bull River  
Shipment ID: BR-EXP\_06\_2019  
P.O. Number  
Number of Samples: 17

## SAMPLE DISPOSAL

IMM-PLP Return immediately after analysis  
DISP-RJT Dispose of Reject After 60 days

## SAMPLE PREPARATION AND ANALYTICAL PROCEDURES


Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
PRP70-250	15	Crush, split and pulverize 250 g rock to 200 mesh			VAN
SLBHP	2	Sort, label and box pulps			VAN
FA330-Au	17	Fire assay fusion Au by ICP-ES	30	Completed	VAN
EN002	17	Environmental disposal charge-Fire assay lead waste			VAN
MA370	17	4-Acid Digestion ICP-ES Finish	0.5	Completed	VAN
EN001-MA	17	Environmental disposal fee - Multi-acid neutralization			VAN
MA200	17	4 Acid digestion ICP-MS analysis	0.25	Completed	VAN

## ADDITIONAL COMMENTS

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

Invoice To: **Bul River Mineral Corporation**  
Box 845  
Cranbrook British Columbia V1C 4J6  
Canada

CC: Tim Hewison

  
**JEFFREY CANNON**  
Geochemistry Department Supervisor



**BUREAU VERITAS**  
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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **Bul River Mineral Corporation**

Box 845

Cranbrook British Columbia V1C 4J6 Canada

Project: Bull River

Report Date: November 09, 2019

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Part: 1 of 4

# CERTIFICATE OF ANALYSIS

VAN19003198.1

Method	WGHT	FA330	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	
Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Sr	Cd	Sb	Bi	Ca	P	Cr	Mg	
Unit	kg	ppb	%	%	%	%	ppm	%	%	%	%	%	%	%	%	%	%	%	%	%	
MDL	0.01	2	0.001	0.001	0.02	0.01	2	0.001	0.001	0.01	0.01	0.02	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01	
035254	Drill Core	4.45	3	<0.001	0.005	<0.02	<0.01	<2	0.001	<0.001	0.13	3.95	<0.02	<0.01	<0.001	<0.01	<0.01	1.63	0.05	0.002	1.38
035255	Rock Pulp	0.11	167	<0.001	0.142	0.06	0.20	13	0.002	0.002	0.07	8.34	0.03	<0.01	0.001	<0.01	<0.01	1.33	0.03	0.006	1.86
035256	Drill Core	1.08	<2	<0.001	0.007	<0.02	<0.01	<2	0.002	0.001	0.55	7.47	<0.02	<0.01	<0.001	<0.01	<0.01	1.50	<0.01	<0.001	2.37
035257	Drill Core	5.21	8	<0.001	0.006	<0.02	<0.01	<2	0.002	0.001	0.24	5.99	<0.02	<0.01	<0.001	<0.01	<0.01	0.83	0.05	0.003	1.99
035258	Drill Core	5.33	5	<0.001	0.013	<0.02	<0.01	<2	0.002	0.002	0.29	7.53	<0.02	<0.01	<0.001	<0.01	<0.01	1.59	0.04	0.002	2.21
035259	Drill Core	2.78	2	<0.001	0.004	<0.02	<0.01	<2	<0.001	<0.001	0.39	4.64	<0.02	<0.01	<0.001	<0.01	<0.01	1.85	<0.01	<0.001	1.54
035260	Drill Core	4.03	5	<0.001	0.006	<0.02	<0.01	<2	0.001	0.001	0.15	5.95	<0.02	<0.01	<0.001	<0.01	<0.01	2.53	0.05	0.002	1.87
035261	Drill Core	5.39	5	<0.001	0.006	<0.02	<0.01	<2	0.002	0.002	0.21	7.34	<0.02	<0.01	<0.001	<0.01	<0.01	2.50	0.04	0.002	2.22
035262	Drill Core	1.29	3	<0.001	0.004	<0.02	<0.01	<2	0.002	0.001	0.30	4.57	<0.02	<0.01	<0.001	<0.01	<0.01	5.24	0.02	0.002	2.08
035263	Rock Pulp	0.11	3	<0.001	0.002	<0.02	<0.01	<2	<0.001	<0.001	0.08	2.84	<0.02	0.02	<0.001	<0.01	<0.01	1.74	0.04	<0.001	0.55
035264	Drill Core	4.68	3	<0.001	0.002	<0.02	<0.01	<2	0.001	<0.001	0.06	2.07	<0.02	<0.01	<0.001	<0.01	<0.01	1.30	0.03	0.003	0.96
035265	Drill Core	3.38	3	<0.001	0.002	<0.02	<0.01	<2	0.001	<0.001	0.05	2.01	<0.02	<0.01	<0.001	<0.01	<0.01	1.09	0.04	0.003	0.86
035266	Drill Core	3.54	2	<0.001	0.002	<0.02	<0.01	<2	0.001	<0.001	0.07	2.24	<0.02	<0.01	<0.001	<0.01	<0.01	1.54	0.04	0.002	0.95
035267	Drill Core	2.43	8	<0.001	0.016	<0.02	<0.01	<2	0.003	0.002	0.30	9.13	<0.02	<0.01	<0.001	<0.01	<0.01	1.75	0.03	0.002	2.29
035268	Drill Core	3.71	8	<0.001	0.011	<0.02	<0.01	<2	0.002	0.002	0.29	6.81	<0.02	<0.01	<0.001	<0.01	<0.01	2.52	0.03	0.002	1.90
035269	Drill Core	3.31	15	<0.001	0.012	<0.02	<0.01	<2	0.002	0.002	0.18	6.12	<0.02	<0.01	<0.001	<0.01	<0.01	0.94	0.04	0.002	1.56
035270	Drill Core	3.26	6	<0.001	0.017	<0.02	<0.01	<2	0.002	0.002	0.31	8.21	<0.02	<0.01	<0.001	<0.01	<0.01	1.30	0.03	0.002	2.16



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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **Bul River Mineral Corporation**

Box 845

Cranbrook British Columbia V1C 4J6 Canada

Project: Bull River

Report Date: November 09, 2019

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# CERTIFICATE OF ANALYSIS

VAN19003198.1

Method	MA370	MA370	MA370	MA370	MA370	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200
Analyte	Al	Na	K	W	S	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb	
Unit	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
MDL	0.01	0.01	0.01	0.01	0.05	0.1	0.1	0.1	1	0.1	0.1	0.2	1	0.01	1	0.1	0.1	1	0.1	0.1	
035254	Drill Core	6.81	0.06	3.44	<0.01	0.70	0.7	52.4	5.2	21	<0.1	13.6	9.9	1207	3.78	9	1.9	9.2	25	<0.1	1.4
035255	Rock Pulp	5.60	0.14	1.31	<0.01	4.41	3.2	1353.4	521.3	1948	11.9	20.3	22.9	695	7.89	315	1.5	3.3	65	14.0	27.2
035256	Drill Core	0.22	0.02	0.07	<0.01	1.16	0.1	80.7	4.1	19	0.1	23.4	14.2	5295	7.18	<1	<0.1	0.5	35	<0.1	0.7
035257	Drill Core	7.70	0.06	3.76	<0.01	0.85	0.7	57.4	5.3	33	<0.1	16.5	11.7	2167	5.50	6	2.1	9.0	18	<0.1	1.5
035258	Drill Core	5.47	0.04	2.11	<0.01	1.27	0.7	123.7	5.4	51	0.1	15.1	14.4	2752	7.07	2	1.5	8.2	36	<0.1	1.4
035259	Drill Core	0.29	0.01	0.04	<0.01	0.49	0.2	44.2	7.0	22	0.2	6.2	7.2	3628	4.48	1	<0.1	0.5	42	<0.1	1.6
035260	Drill Core	6.22	0.04	2.68	<0.01	0.86	1.1	57.4	8.1	41	0.2	12.9	13.8	1428	5.61	5	2.5	10.0	34	<0.1	2.6
035261	Drill Core	5.77	0.04	2.32	<0.01	1.01	2.5	58.7	4.6	51	0.1	15.0	17.6	1955	6.80	14	2.3	8.4	30	<0.1	1.7
035262	Drill Core	3.97	0.04	2.11	<0.01	0.95	0.5	47.2	7.1	21	<0.1	15.6	13.8	2854	4.34	5	1.3	5.8	100	<0.1	1.9
035263	Rock Pulp	7.41	3.56	1.59	<0.01	0.06	4.0	23.6	2.7	40	<0.1	8.1	4.8	753	2.69	2	1.0	2.5	197	<0.1	0.2
035264	Drill Core	7.34	0.06	4.09	<0.01	0.51	0.9	23.5	3.5	14	<0.1	11.2	7.1	621	1.95	2	1.8	9.1	26	<0.1	1.5
035265	Drill Core	6.87	0.06	3.96	<0.01	0.54	1.1	21.4	4.0	14	<0.1	10.8	7.4	484	1.92	5	2.1	10.3	22	<0.1	1.6
035266	Drill Core	6.32	0.05	3.46	<0.01	0.62	0.7	24.2	7.2	12	0.3	10.3	8.7	743	2.16	4	1.8	8.9	26	<0.1	3.9
035267	Drill Core	4.71	0.02	1.51	<0.01	1.09	1.0	166.4	6.1	66	0.4	23.5	22.2	2844	8.74	8	2.1	6.4	29	<0.1	4.8
035268	Drill Core	5.14	0.04	2.39	<0.01	0.83	1.3	118.4	3.5	38	<0.1	19.1	14.2	2682	6.37	10	2.0	8.1	36	<0.1	2.0
035269	Drill Core	5.92	0.04	2.59	<0.01	0.77	0.8	119.1	4.8	38	<0.1	16.2	17.3	1646	5.60	13	1.8	7.6	18	<0.1	1.5
035270	Drill Core	5.00	0.03	1.97	<0.01	0.97	1.0	168.3	4.3	58	0.1	18.7	17.0	2899	7.65	3	1.8	7.2	25	<0.1	1.6



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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:** **Bul River Mineral Corporation**

Box 845  
Cranbrook British Columbia V1C 4J6 Canada

Project: Bull River

Report Date: November 09, 2019

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# CERTIFICATE OF ANALYSIS

VAN19003198.1

Method	Analyte	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	
		Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Ce	Sn	Y	Nb	Ta	Be
Unit		ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
MDL		0.1	1	0.01	0.001	0.1	1	0.01	1	0.001	0.01	0.001	0.01	0.1	0.1	1	0.1	0.1	0.1	0.1	
035254	Drill Core	0.9	45	1.61	0.048	36.1	28	1.40	515	0.126	6.20	0.052	3.46	0.7	72.0	75	2.4	12.0	5.9	0.3	4
035255	Rock Pulp	8.6	67	1.25	0.028	13.5	65	1.84	40	0.146	5.17	0.134	1.21	4.7	51.7	31	13.0	11.7	3.7	0.3	<1
035256	Drill Core	0.3	2	1.55	0.002	1.3	4	2.42	21	0.003	0.21	0.018	0.08	<0.1	2.1	3	<0.1	3.4	<0.1	<0.1	<1
035257	Drill Core	0.4	51	0.71	0.045	34.9	31	1.92	398	0.112	6.30	0.053	3.78	0.6	73.3	77	2.2	9.7	4.7	0.2	3
035258	Drill Core	0.3	35	1.52	0.046	40.9	21	2.22	289	0.069	5.36	0.036	2.26	0.5	46.3	89	1.5	9.6	2.7	0.1	2
035259	Drill Core	0.1	2	1.78	0.005	3.0	3	1.58	15	0.002	0.26	0.015	0.04	<0.1	1.9	6	0.3	4.7	<0.1	<0.1	<1
035260	Drill Core	0.5	43	2.29	0.044	33.1	27	1.89	478	0.117	6.17	0.038	2.94	0.6	83.5	59	2.7	11.3	5.1	0.3	3
035261	Drill Core	0.6	45	2.31	0.037	32.5	26	2.15	274	0.114	5.53	0.033	2.49	0.5	70.2	57	2.0	11.4	4.5	0.3	3
035262	Drill Core	0.3	27	5.03	0.023	31.4	19	2.10	260	0.076	3.94	0.032	2.20	0.5	45.5	60	1.7	11.7	1.9	0.1	2
035263	Rock Pulp	<0.1	34	1.51	0.040	9.2	12	0.54	767	0.204	6.24	3.341	1.62	0.5	51.3	19	2.2	13.7	5.5	0.4	1
035264	Drill Core	0.2	57	1.17	0.035	34.5	28	0.93	476	0.181	6.67	0.052	3.39	0.9	68.0	67	2.7	10.3	5.0	0.3	5
035265	Drill Core	0.2	54	1.00	0.042	42.0	28	0.87	470	0.186	6.48	0.051	3.06	0.9	68.6	80	2.6	10.8	5.4	0.3	4
035266	Drill Core	0.3	49	1.42	0.039	41.8	25	0.96	409	0.148	5.97	0.046	3.45	0.7	73.7	76	2.9	9.2	4.1	0.3	3
035267	Drill Core	0.5	32	1.64	0.026	29.2	19	2.28	216	0.093	4.61	0.023	1.52	0.4	60.8	52	2.3	10.3	3.8	0.3	3
035268	Drill Core	0.5	38	2.42	0.033	34.0	23	1.85	339	0.149	5.00	0.033	2.52	0.6	66.9	61	2.1	12.8	6.3	0.4	3
035269	Drill Core	0.7	38	0.83	0.040	27.5	25	1.53	415	0.110	5.36	0.034	2.53	0.5	53.7	52	2.0	8.6	4.4	0.2	2
035270	Drill Core	0.9	35	1.10	0.031	26.6	21	2.08	311	0.087	4.82	0.027	1.84	0.4	71.7	49	1.6	10.2	3.4	0.2	2



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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:** **Bul River Mineral Corporation**

Box 845  
Cranbrook British Columbia V1C 4J6 Canada

Project: Bull River

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# CERTIFICATE OF ANALYSIS

VAN19003198.1

Method	Analyte	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200
		Sc	Li	S	Rb	Hf	In	Re	Se	Te	Tl
Unit		ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL		1	0.1	0.1	0.1	0.1	0.05	0.005	1	0.5	0.5
035254	Drill Core	9	19.3	0.7	91.3	2.1	0.15	<0.005	<1	<0.5	1.2
035255	Rock Pulp	10	35.5	4.2	44.7	1.6	1.09	<0.005	26	<0.5	5.7
035256	Drill Core	2	2.0	1.1	2.3	<0.1	0.07	<0.005	<1	<0.5	<0.5
035257	Drill Core	8	21.3	0.7	100.9	2.3	0.11	<0.005	<1	<0.5	1.2
035258	Drill Core	6	21.2	1.1	76.4	1.4	0.14	<0.005	<1	<0.5	0.8
035259	Drill Core	2	2.2	0.4	1.4	<0.1	0.09	<0.005	<1	<0.5	<0.5
035260	Drill Core	8	24.0	0.8	106.7	2.8	0.19	<0.005	<1	<0.5	1.0
035261	Drill Core	8	22.8	0.9	87.6	2.3	0.20	<0.005	<1	<0.5	0.8
035262	Drill Core	8	14.6	0.9	98.5	1.5	0.07	<0.005	<1	0.9	0.8
035263	Rock Pulp	6	1.4	<0.1	26.1	1.7	<0.05	<0.005	<1	<0.5	<0.5
035264	Drill Core	11	20.1	0.5	118.6	2.2	0.09	<0.005	<1	<0.5	1.5
035265	Drill Core	11	19.2	0.5	118.5	2.1	0.07	<0.005	<1	<0.5	1.4
035266	Drill Core	9	20.9	0.6	117.2	2.1	0.15	<0.005	<1	<0.5	1.2
035267	Drill Core	7	22.4	1.1	64.2	2.2	0.29	<0.005	<1	<0.5	0.5
035268	Drill Core	7	17.0	0.8	104.6	1.9	0.24	<0.005	<1	<0.5	0.8
035269	Drill Core	8	22.4	0.7	85.1	1.6	0.26	<0.005	<1	<0.5	0.9
035270	Drill Core	7	19.1	0.8	78.3	2.3	0.28	<0.005	<1	<0.5	0.6



Bureau Veritas Commodities Canada Ltd.  
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada  
PHONE (604) 253-3158

**Client:** **Bul River Mineral Corporation**  
Box 845  
Cranbrook British Columbia V1C 4J6 Canada

**Project:** Bull River  
**Report Date:** November 09, 2019

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# QUALITY CONTROL REPORT

VAN19003198.1

Method	WGHT	FA330	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370	MA370
Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Sr	Cd	Sb	Bi	Ca	P	Cr	Mg	
Unit	kg	ppb	%	%	%	%	ppm	%	%	%	%	%	%	%	%	%	%	%	%	%	
MDL	0.01	2	0.001	0.001	0.02	0.01	2	0.001	0.001	0.01	0.01	0.02	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01	
Pulp Duplicates																					
035255	Rock Pulp	0.11	167	<0.001	0.142	0.06	0.20	13	0.002	0.002	0.07	8.34	0.03	<0.01	0.001	<0.01	<0.01	1.33	0.03	0.006	1.86
REP 035255	QC		175	<0.001	0.142	0.06	0.21	13	0.002	0.002	0.07	8.37	0.03	<0.01	0.001	<0.01	<0.01	1.34	0.03	0.006	1.86
035269	Drill Core	3.31	15	<0.001	0.012	<0.02	<0.01	<2	0.002	0.002	0.18	6.12	<0.02	<0.01	<0.001	<0.01	<0.01	0.94	0.04	0.002	1.56
REP 035269	QC																				
Reference Materials																					
STD CDN-ME-14	Standard			0.002	1.247	0.51	3.23	43	0.002	0.018	0.09	18.16	<0.02	<0.01	0.010	<0.01	0.01	0.79	0.02	0.001	1.28
STD CDN-ME-9	Standard			<0.001	0.672	<0.02	0.01	4	0.986	0.019	0.13	14.27	<0.02	0.03	<0.001	<0.01	<0.01	4.33	0.07	0.030	4.01
STD KO73987	Standard		5600																		
STD OREAS25A-4A	Standard																				
STD OREAS25A-4A	Standard																				
STD OREAS45E	Standard																				
STD OREAS45E	Standard																				
STD OXA131	Standard		74																		
STD KO73987 Expected			5640																		
STD OXA131 Expected			77																		
STD CDN-ME-14 Expected				1.221	0.495	3.17	43.5	0.002	0.0172	0.0883	18.04	0.0088		0.0088		0.0094	0.747	0.0147	0.0014	1.28	
STD CDN-ME-9 Expected				0.654		0.012		0.93	0.0169	0.121	13.84		0.03				4.21	0.06	0.0284	4.05	
STD OREAS25A-4A Expected																					
STD OREAS45E Expected																					
BLK	Blank		3																		
BLK	Blank			<0.001	<0.001	<0.02	<0.01	<2	<0.001	<0.001	<0.01	<0.01	<0.02	<0.01	<0.001	<0.01	<0.01	<0.01	<0.01	<0.001	<0.01
BLK	Blank																				
Prep Wash																					
ROCK-VAN	Prep Blank		3	<0.001	<0.001	<0.02	<0.01	<2	<0.001	<0.001	0.07	2.28	<0.02	0.02	<0.001	<0.01	<0.01	1.63	0.05	<0.001	0.58
ROCK-VAN	Prep Blank		3	<0.001	<0.001	<0.02	<0.01	<2	<0.001	<0.001	0.07	2.37	<0.02	0.02	<0.001	<0.01	<0.01	1.76	0.05	<0.001	0.65





Bureau Veritas Commodities Canada Ltd.  
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada  
PHONE (604) 253-3158

**Client:** **Bul River Mineral Corporation**  
Box 845  
Cranbrook British Columbia V1C 4J6 Canada

**Project:** Bull River  
**Report Date:** November 09, 2019

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# QUALITY CONTROL REPORT

VAN19003198.1

Method	Analyte	MA370	MA370	MA370	MA370	MA370	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	
		Al	Na	K	W	S	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb
Unit		%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	
MDL		0.01	0.01	0.01	0.01	0.05	0.1	0.1	0.1	1	0.1	0.1	0.2	1	0.01	1	0.1	0.1	0.1	0.1	
Pulp Duplicates																					
035255	Rock Pulp	5.60	0.14	1.31	<0.01	4.41	3.2	1353.4	521.3	1948	11.9	20.3	22.9	695	7.89	315	1.5	3.3	65	14.0	27.2
REP 035255	QC	5.66	0.14	1.31	<0.01	4.44															
035269	Drill Core	5.92	0.04	2.59	<0.01	0.77	0.8	119.1	4.8	38	<0.1	16.2	17.3	1646	5.60	13	1.8	7.6	18	<0.1	1.5
REP 035269	QC						0.8	127.1	5.1	33	<0.1	17.2	18.2	1672	5.78	16	1.8	7.7	19	<0.1	1.4
Reference Materials																					
STD CDN-ME-14	Standard	4.55	0.54	1.67	<0.01	16.00															
STD CDN-ME-9	Standard	6.80	1.85	0.64	<0.01	2.63															
STD KO73987	Standard																				
STD OREAS25A-4A	Standard						2.5	38.5	26.2	48	<0.1	48.7	8.3	479	6.58	11	3.1	16.2	47	<0.1	0.7
STD OREAS25A-4A	Standard						2.2	35.3	24.9	43	<0.1	49.9	7.4	521	6.47	10	2.9	15.7	47	<0.1	0.6
STD OREAS45E	Standard						2.5	780.4	19.1	53	0.3	457.6	58.9	554	24.56	17	2.6	12.4	17	<0.1	1.0
STD OREAS45E	Standard						2.1	798.1	18.5	47	0.3	467.5	61.3	569	25.06	17	2.5	13.1	17	<0.1	1.0
STD OXA131	Standard																				
STD KO73987 Expected																					
STD OXA131 Expected																					
STD CDN-ME-14 Expected		4.47	0.53	1.7		16.14															
STD CDN-ME-9 Expected		6.74	1.86	0.616		2.58															
STD OREAS25A-4A Expected							2.41	33.9	25.2	44.4		45.8	7.7	480	6.6	9.94	2.94	15.8	48.5		0.65
STD OREAS45E Expected							2.4	780	18.2	46.7	0.311	454	57	570	24.12	16.3	2.41	12.9	15.9	0.06	1
BLK	Blank																				
BLK	Blank	<0.01	<0.01	<0.01	<0.01	<0.05															
BLK	Blank						<0.1	0.5	<0.1	<1	<0.1	<0.1	<0.2	<1	<0.01	<1	<0.1	<0.1	<1	<0.1	<0.1
Prep Wash																					
ROCK-VAN	Prep Blank	7.56	3.77	1.60	<0.01	<0.05	0.7	6.8	11.1	41	0.3	1.0	4.0	680	2.04	3	1.2	3.0	197	<0.1	2.5
ROCK-VAN	Prep Blank	7.68	3.68	1.58	<0.01	<0.05	0.9	11.0	3.2	46	<0.1	1.6	5.1	748	2.24	2	1.2	2.5	203	<0.1	0.6



Bureau Veritas Commodities Canada Ltd.  
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada  
PHONE (604) 253-3158

**Client:** **Bul River Mineral Corporation**  
Box 845  
Cranbrook British Columbia V1C 4J6 Canada

**Project:** Bull River  
**Report Date:** November 09, 2019

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# QUALITY CONTROL REPORT

VAN19003198.1

Method	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	
Analyte	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Ce	Sn	Y	Nb	Ta	Be	
Unit	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
MDL	0.1	1	0.01	0.001	0.1	1	0.01	1	0.001	0.01	0.001	0.01	0.1	0.1	1	0.1	0.1	0.1	0.1	0.1	
Pulp Duplicates																					
035255	Rock Pulp	8.6	67	1.25	0.028	13.5	65	1.84	40	0.146	5.17	0.134	1.21	4.7	51.7	31	13.0	11.7	3.7	0.3	<1
REP 035255	QC																				
035269	Drill Core	0.7	38	0.83	0.040	27.5	25	1.53	415	0.110	5.36	0.034	2.53	0.5	53.7	52	2.0	8.6	4.4	0.2	2
REP 035269	QC	0.8	40	0.84	0.040	27.9	26	1.55	433	0.111	5.42	0.034	2.49	0.5	57.2	52	2.0	8.6	4.6	0.2	3
Reference Materials																					
STD CDN-ME-14	Standard																				
STD CDN-ME-9	Standard																				
STD KO73987	Standard																				
STD OREAS25A-4A	Standard	0.4	159	0.26	0.049	21.6	129	0.35	152	0.895	8.59	0.140	0.48	1.8	148.5	46	4.5	10.0	19.6	1.5	<1
STD OREAS25A-4A	Standard	0.3	159	0.27	0.049	20.7	115	0.36	149	0.914	8.63	0.138	0.50	1.9	148.7	44	3.7	9.9	19.6	1.4	1
STD OREAS45E	Standard	0.3	307	0.06	0.033	10.2	946	0.16	257	0.518	6.72	0.050	0.32	0.9	90.4	21	1.3	7.5	6.0	0.5	<1
STD OREAS45E	Standard	0.2	316	0.06	0.041	8.8	992	0.18	254	0.545	6.97	0.056	0.32	1.0	95.6	20	1.0	7.4	6.2	0.5	<1
STD OXA131	Standard																				
STD KO73987 Expected																					
STD OXA131 Expected																					
STD CDN-ME-14 Expected																					
STD CDN-ME-9 Expected																					
STD OREAS25A-4A Expected		0.37	157	0.301	0.048	21.8	115	0.327	147	0.93	8.87	0.131	0.482	2	155	47.3	4.06	10.5	20.9	1.4	0.93
STD OREAS45E Expected		0.28	322	0.065	0.034	11	979	0.156	252	0.559	6.78	0.059	0.324	1.07	97	23.5	1.32	8.28	6.8	0.54	
BLK	Blank																				
BLK	Blank																				
BLK	Blank	<0.1	<1	<0.01	<0.001	<0.1	<1	<0.01	<1	<0.001	<0.01	0.002	<0.01	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<1
Prep Wash																					
ROCK-VAN	Prep Blank	<0.1	37	1.43	0.044	11.8	3	0.54	756	0.213	6.85	3.622	1.50	0.3	46.9	24	1.5	16.7	5.5	0.4	1
ROCK-VAN	Prep Blank	<0.1	45	1.62	0.047	10.1	4	0.65	783	0.228	6.60	3.478	1.51	0.3	48.4	20	0.9	15.4	5.3	0.4	<1



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Method	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200
Analyte	Sc	Li	S	Rb	Hf	In	Re	Se	Te	Tl	
Unit	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
MDL	1	0.1	0.1	0.1	0.1	0.05	0.005	1	0.5	0.5	
Pulp Duplicates											
035255	Rock Pulp	10	35.5	4.2	44.7	1.6	1.09	<0.005	26	<0.5	5.7
REP 035255	QC										
035269	Drill Core	8	22.4	0.7	85.1	1.6	0.26	<0.005	<1	<0.5	0.9
REP 035269	QC	8	20.0	0.7	79.9	1.6	0.17	<0.005	<1	<0.5	0.8
Reference Materials											
STD CDN-ME-14	Standard										
STD CDN-ME-9	Standard										
STD KO73987	Standard										
STD OREAS25A-4A	Standard	13	40.9	<0.1	56.7	4.3	0.09	<0.005	2	<0.5	<0.5
STD OREAS25A-4A	Standard	12	38.4	<0.1	57.0	3.9	<0.05	<0.005	3	<0.5	<0.5
STD OREAS45E	Standard	92	6.7	<0.1	21.1	2.8	0.12	<0.005	2	<0.5	<0.5
STD OREAS45E	Standard	89	6.1	<0.1	20.2	3.0	0.10	<0.005	3	<0.5	<0.5
STD OXA131	Standard										
STD KO73987 Expected											
STD OXA131 Expected											
STD CDN-ME-14 Expected											
STD CDN-ME-9 Expected											
STD OREAS25A-4A Expected		13.7	36.7	0.047	61	4.14	0.09		2.4		0.35
STD OREAS45E Expected		93	6.58	0.046	21.2	3.11	0.099		2.97	0.1	0.15
BLK	Blank										
BLK	Blank										
BLK	Blank	<1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.005	<1	<0.5	<0.5
Prep Wash											
ROCK-VAN	Prep Blank	7	2.4	<0.1	27.5	1.7	<0.05	<0.005	<1	<0.5	<0.5
ROCK-VAN	Prep Blank	8	2.1	<0.1	28.0	1.7	<0.05	<0.005	<1	<0.5	<0.5