BC Geological Survey
Assessment Report
38089

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)]: Geologic report, map, X-Sec, & Reinterpretation **TOTAL COST:** $6612.46

AUTHOR(S): Christine A. Johnson **SIGNATURE(S):** Christine Johnson

Digitally signed by Christine Johnson
DN: cn=Christine Johnson, o, ou, email=cordillera.exploration@gmail.com, c=US
Date: 2019.03.20 11:04:23 -07'00'

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S): **YEAR OF WORK:** 2018

STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE(S): 5723659

PROPERTY NAME: Libby

CLAIM NAME(S) (on which the work was done): Libby 1 (403418)

COMMODITIES SOUGHT: Zn, Pb

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN:

MINING DIVISION: Nelson **NTS/BCGS:** 82F

LATITUDE: 49 ° 00 ' 29 " **LONGITUDE:** 117 ° 11 ' 19 " **(at centre of work)**

OWNER(S):
1) Guinet Management Inc 2)

MAILING ADDRESS:
46349 Hope River Road
Chilliwack, BC V2P 3P4

OPERATOR(S) [who paid for the work]:
1) Same as above 2)

MAILING ADDRESS:
Same as above

PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude):
Metaline, Nelway, Ledbetter, Active, Maitlen, Laib, Salmo, Cambrian-Ordovician, Kootenay Arc, Perititdal, Lead Hill Fault Slate Creek Fault, Slate Creek Thrust Zone, Boundary Anticline, Carbonate-Hosted Zinc-Lead, MVT, Paleokarst, Dolostone, Hydrothermal Breccia, Silicification, Dolomitization, Josephine Breccia, Platform Carbonates, Anticline

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS: Geologic Report & Sections Libby Claim Block 1 & 2, Salmo Pb-Zn Area, J. A. Morton, 2012, Libby & Lead Hill Property, E. G. Olfert, 1994

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TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
GEOLOGICAL (scale, area)			
Ground, mapping	191.66 Hectacres	Libby 1	$6612.46 CAD
Photo interpretation			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic			
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne			
GEOCHEMICAL (number of samples analysed for...)			
Soil			
Silt			
Rock			
Other			
DRILLING (total metres; number of holes, size)			
Core			
Non-core			
RELATED TECHNICAL			
Sampling/assaying			
Petrographic			
Mineralographic			
Metallurgic			
PROSPECTING (scale, area)			
PREPARATORY / PHYSICAL			
Line/grid (kilometres)			
Topographic/Photogrammetric (scale, area)			
Legal surveys (scale, area)			
Road, local access (kilometres)/trail			
Trench (metres)			
Underground dev. (metres)			
Other			
		TOTAL COST:	

Geologic Assessment Report and Cross-Sections

on

Libby Claim Block 1

September 4th, 2019

Latitude and Longitude: 49°N 117°W

Salmo Pb-Zn Area
Nelson Mining Division
Southeast British Columbia

Prepared for:

Guinet Management Inc.
46349 Hope River Road
Chilliwack, British Columbia V2P 3P4

By: Christine (Hellbusch) Johnson, Msc., PG, CPG
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Curlew, WA 99118

Cordillera Exploration Services, LLC

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1. SUMMARY

Geologic mapping was conducted in areas with little to no information. Additionally, areas of interest for potential drilling were visited in order to determine style, orientation, and projection of mineralization and alteration. An alternate interpretation of stratigraphy and alteration and/or mineralization are offered as a result of this investigation. Potential for discovery of yellowhead-style mineralization within the Libby 1 claim block exists as indicated by the alteration, stratigraphy, and areas with structural controls. Continued detailed mapping, especially in the southwest portion of the Libby 1 claim is recommended to further develop drill targets. Perhaps the most important study that needs to be completed are measured stratigraphic columns throughout the property and ideally outside the property in order to determine transgressive and regressive sequences. It is proposed here that the mineralization in the district is more than likely hosted within the regressive sequences and therefore, emphasis should be place on the stratigraphy so that mineralized horizons may be identified in conjunction with structures. Three proposed drill holes are offered where the level of geologic confidence is stronger.

2. INTRODUCTION

2.1 Purpose and Scope

The purpose of the study was to conduct surface mapping, review previous mapping and interpretations, and propose drill holes, based upon the author's work experience in the Metaline Mining District, northeast Nevada, and expertise in carbonate stratigraphy and surface mapping. Emphasis was placed on the southern portion of the Libby 1 claim (Figure 2).

2.2 Location, Access, Physiography, Climate, and History

The Libby Property is located within the Kootenay Arch, south-central British Columbia, in the Nelson Mining Division (Figure 1, Figure 2). The Libby Claim is located in the Selkirk Mountains, on the southern flank of Lost Mountain and west side of Ripple Mountain. Elevations range from 2600 feet near the Salmo River to 4200 feet on the United States-Canada border. The terrain is generally steep and has very thick forests of Cedar, Engelman Fir, Birch, and Alder. The claims are located at a longitude and latitude, respectively, of 49^{o} 00' 20"N and 117^{o} 11' 10"W; approximately 60 kilometers south of Nelson and 20 kilometers east of Salmo, British Columbia. The southern boundary of the claim is on the United States-Canada border.

Within the property or nearby are the South Salmo River, Lead Creek, and Stagleap Creek. The Crowsnest Highway (Highway 3) runs just to the north of the property. Within the property are recent logging and old mining and drill roads, providing access to old prospects and drill sites.

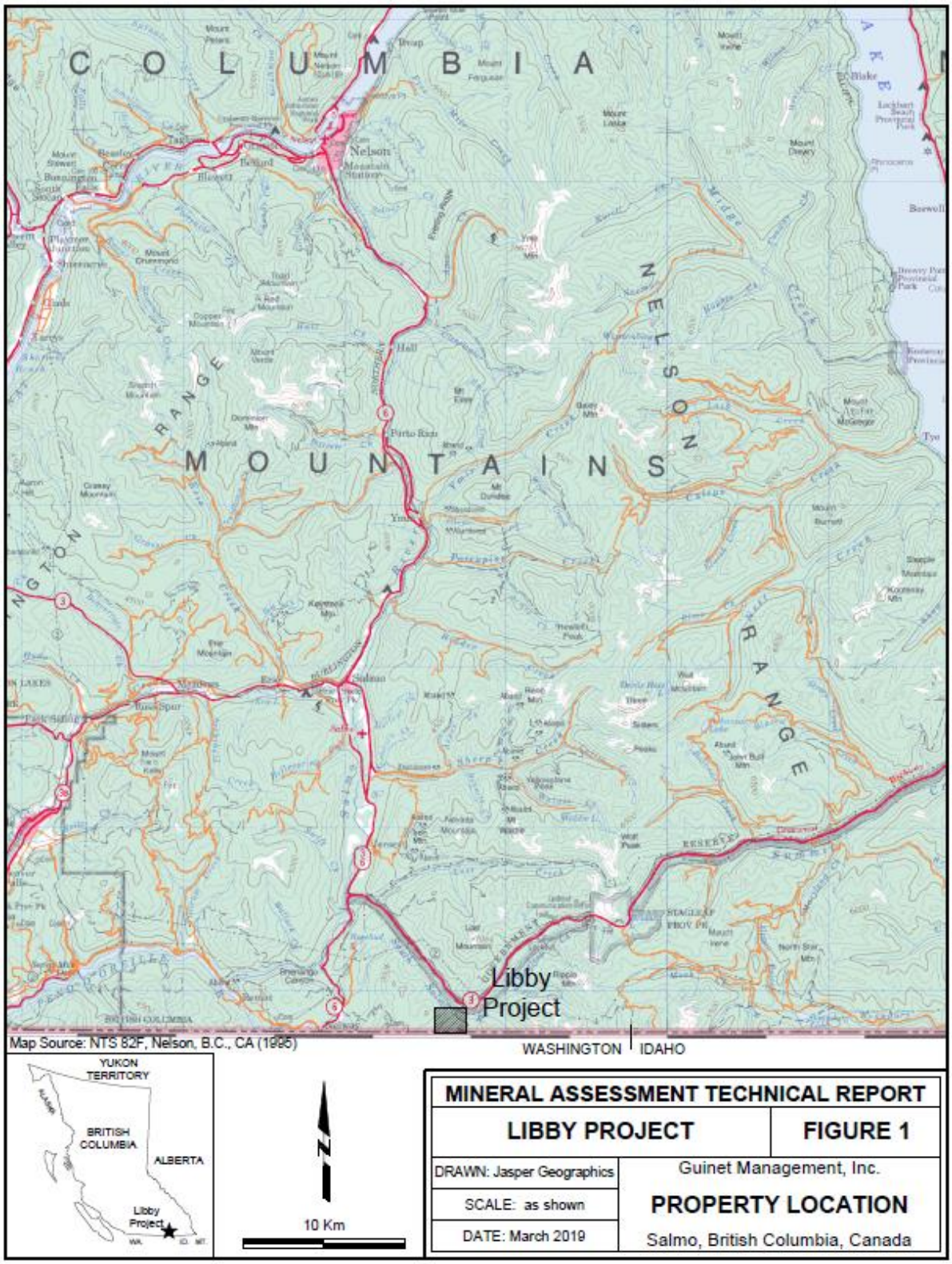

Figure 2.1.1: Location map of the Libby Project.

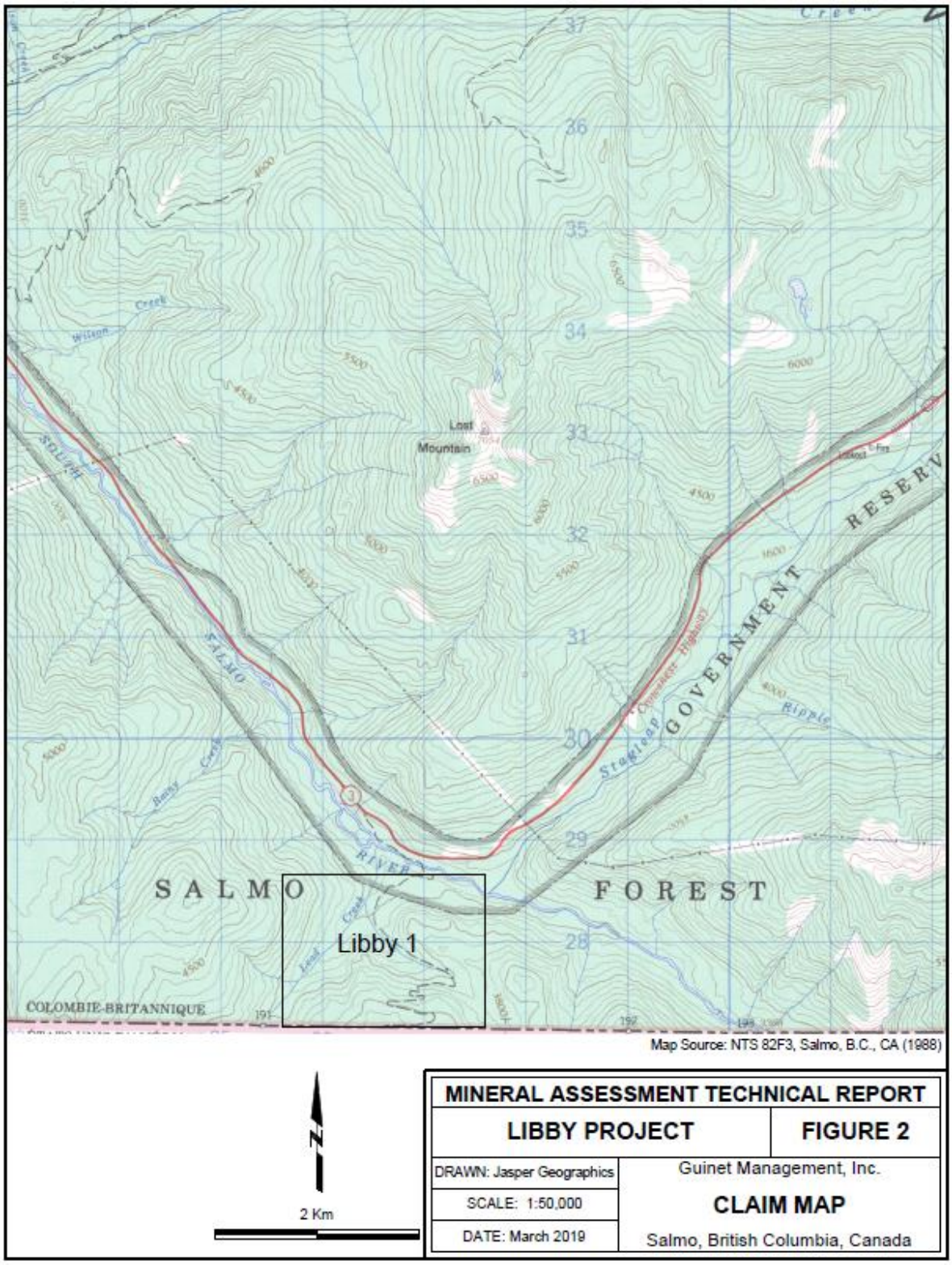

Figure 2.1.2: Claim map of the Libby 1 Claim.

2.3 Claim Information and History

The Libby 1 Claim (Title Number 403418, 20 cells, and expires on 30 June 2022) encompasses approximately 300 hectares and is owned by Victor Guinet. Maps, showing the claim's location can be found in Figures 1 and 2.

The Libby 1 Claim, British Columbia Government Mineral Inventory Number 83F/SW-3, hosts the Old Ed lead-zinc prospect. During 1950's, International Lead and Zinc Mines Limited of Vancouver British Columbia explored the property. Following initial exploration, a road and dozer cuts were constructed in 1952, allowing access to the showings (Olfert, 1994). Then, in 1953, 1.5 tons of ore was mined and shipped, containing 5 ounces of silver, 2357 pounds of lead, and 44 pounds of zinc (Fyles et al, 1959). Small-scale mining operations continued during 1970, with a shipment of 255 tonnes, including 124 grams of gold, 1306 grams of silver, 577 kilograms of lead, and 764 kilograms of zinc (Olfert, 1994).

The Libby 1 claim was staked by Victor Guinet during 1989, covering the Ed Prospect, and then optioned the claim to Worthington Resources Ltd. (Olfert 1994). 19 rock chip and 196 soil samples were collected in 1990, generating lead, zinc, and gold targets.

Then, during 1991, the Libby 1 Claim was optioned by Timmax Resources Corp., which conducted prospecting, trenching, and furthered soil sampling (with 1690 soil samples). This program yielded a new target known as the Yellow Zinc Showing with 37% zinc in grab samples.

Ramrod Gold Corporation (RGC) acquired the property in 1992 from Timmax Resources Corporation (Olfert 1994). RGC furthered development of the property by conducting 833 meters of drilling, targeting I.P. and geochemical anomalies. Drilling results were poor, although, additional targets remain; especially in the Yellowhead horizon.

Morton (2012) conducted field mapping in the claim area. Through this mapping, a stratigraphic breccia-hosted model was proposed.

2.4 Fieldwork

Fieldwork was conducted July 2nd-July 4th 2017 and October 15th, 2018. Mapping was completed on north and north-east facing slopes, which were densely forested and vegetated with mostly cedar and some alder and brush. Outcrops were mostly visible on ridgelines of the steep hillsides. Geology was mapped on a base map of 1:20,000 public quadrangles at a scale of 1:2000 with a Garmin GPSMAP 64 with projection set to UTM NAD83. All structural measurements were made with a quadrant Brunton compass with the declination set to declination for the area provided by the National Oceanic Atmosphere Administration. Once mapping was completed, the mapping was scanned and digitized using ArcMap 10.4.1.

3. GEOL0GY AND MINERALIZATION

3.1 Stratigraphy

The Libby Property contains a relatively small group of exposed strata that has undergone greenschist facies metamorphism. The oldest stratigraphic unit exposed is the Maitlen Phyllite (Cmp), which is comprised of thinly laminated to thinly bedded metamorphosed mudstone.

Overlying the Cambrian Maitlen Phyllite is the Cambrian Metaline Formation (Cm). The basal portion of the Metaline Formation is comprised of micrites with occasional trilobite fossils. Grading upward, the Metaline Formation is comprised of peritidal sequences that belonged to the carbonate platform along the western margin of Laurentia during the upper Cambrian. These sequences are comprised of dolomitic micrites, dolomitic packstones, dolomitic wackestones, and equivalent limestones. The Metaline Formation is overlain by the Ordovician Ledbetter Formation (Ol), forming a nonconformity. Clasts belonging to the Metaline Formation are often found within the Ledbetter Formation at the contact.

The Cambro-Ordovician contact is widely considered to be a third-order regressive sequence in Nevada (Cook, 2005; Figure 3.1) and is also thought to exist in northeast Washington and southeastern British Columbia (Mills et al, 1966; Schuster, 1976). Alternatively, Morton (2012) and Schuster et al (1989) propose the Cm-Ol contact is comprised of debris flow deposits. If this were the case, then turbidite sequences (sequences with reverse grading or fining upward sequences) would be present in the stratigraphy (Cook, 2004) in a gradational sense. However, turbidite sequences have not been observed in the district by this author and others, nor reported or described in literature. The nature of the Cm-Ol contact is distinct and abrupt.

Another argument for the deposition of the upper Metaline Formation-Ledbetter Formation contact in deeper water environment by Morton (2012) is the presence of conodonts and the belief that they only occur in deep-water environments. This relationship is irrelevant, because conodonts are often present in the carbonate platform, typically found in transgressive sequences within the peritidal environment (Hellbusch, 2012).

The Metaline Formation was first subdivided into three subunits by Dings et al (1965): Lower Metaline Formation (thin-bedded limey shale), Intermediate Metaline Formation (light gray thin-thick bedded dolostone), and Upper Metaline Formation (massive micrites, wackstones, and packstones). In the map area, most of the Metaline Formation displays moderate to pervasive dolomitization and therefore is thought to be the Intermediate Metaline Formation. However, the dolomitization is thought to be coeval with deposition and then later further altered by hydrothermal fluids. Light gray to dark gray dolomitic micrites are common. The black micrites typically have a fetid odor. Less common are interbeds of fossiliferous, oncolitic, and oolitic wackstones-packstones. The upper assemblage was not found and the contact with the overlying Ledbetter is mapped as faulted by previous mappers (Morton, 2012) and the amount of offset is unknown at this time.

The contact between the Cm and Ol is often non-planar and more often than not, is karsted (Zieg et al, 2000; Zieg et al., 2001; Rhodes, 2001; Telford, 2001). This karsting occurs along and near the Cm-Ol

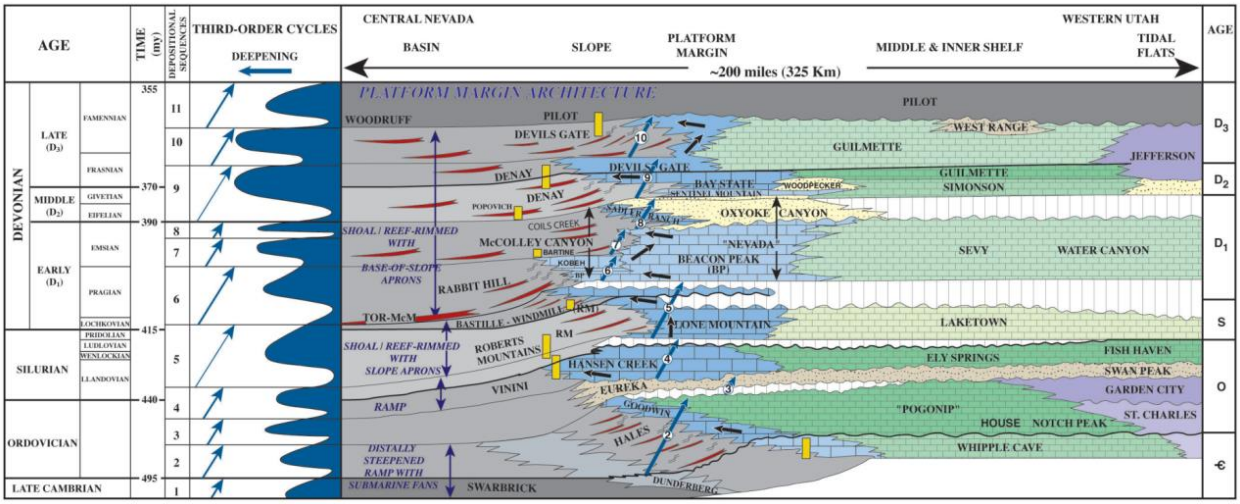

Figure 3.1.1: Stratigraphic facies model pre-Antler orogeny from central Nevada to western Utah, illustrating stratigraphic occurrences of gold in the Carlin Trend and Bald Mountain Mining District, respective third-order cycles, and lithologic names of Upper Cambrian-Upper Devonian strata (Cook, 2005).

contact, which has been previously mapped as the Josephine Lithofacies by Morton (2012). Areas mapped as the Josephine Lithofacies were also mapped visited during 2017 as part of this review and inconsistencies were discovered. Areas where the Josephine Lithofacies were mapped appeared to demonstrate traits of hydrothermal alteration and mineralization of that of the Yellowhead-style mineralization. In other areas, exposure of the Josephine lithofacies were breccias with recrystallized dolostone clasts that suggest hydrothermal alteration. Therefore, the Josephine Lithofacies are remapped as hydrothermal breccia in this report. This relationship will be discussed later in this report.

3.2 Structure

The project area and district were in a passive margin following the Proterozoic and leading up to the Devonian-Mississippian Antler Orogeny (Dickenson, 2006; Figure 3.2.1). Following the Antler Orogeny, the area underwent periodic compression during the mid to late Jurassic and Cretaceous (Dickenson, 2006, DeCelles, 2004; Figure 3.2.2).

Morton (1992) mapped the Slate Creek thrust zone, based upon the observation of strongly foliated Ledbetter Formation. However, this thrust plane has not been mapped along the surface and therefore is inferred (Morton 2012). In this study, the dip direction of the inferred thrust faults were modified to dip northwest, as indicated by the fold vergence direction and placing older over younger strata.

The compressional events formed thrust faults and folds in the district previously described by Morton (2012). Much of the folding as indicated by mapped geology (Dings et al., 1955) indicate thrusting was southwest-vergent. Major folds in the district include the Boundary Anticline and Grandview Anticline-Syncline (Dings et al., 1955), all crudely trending northeast. The Pend Oreille Mine orebody is hosted within the Grandview Anticline. In the map area, two anticlines and one syncline were mapped.

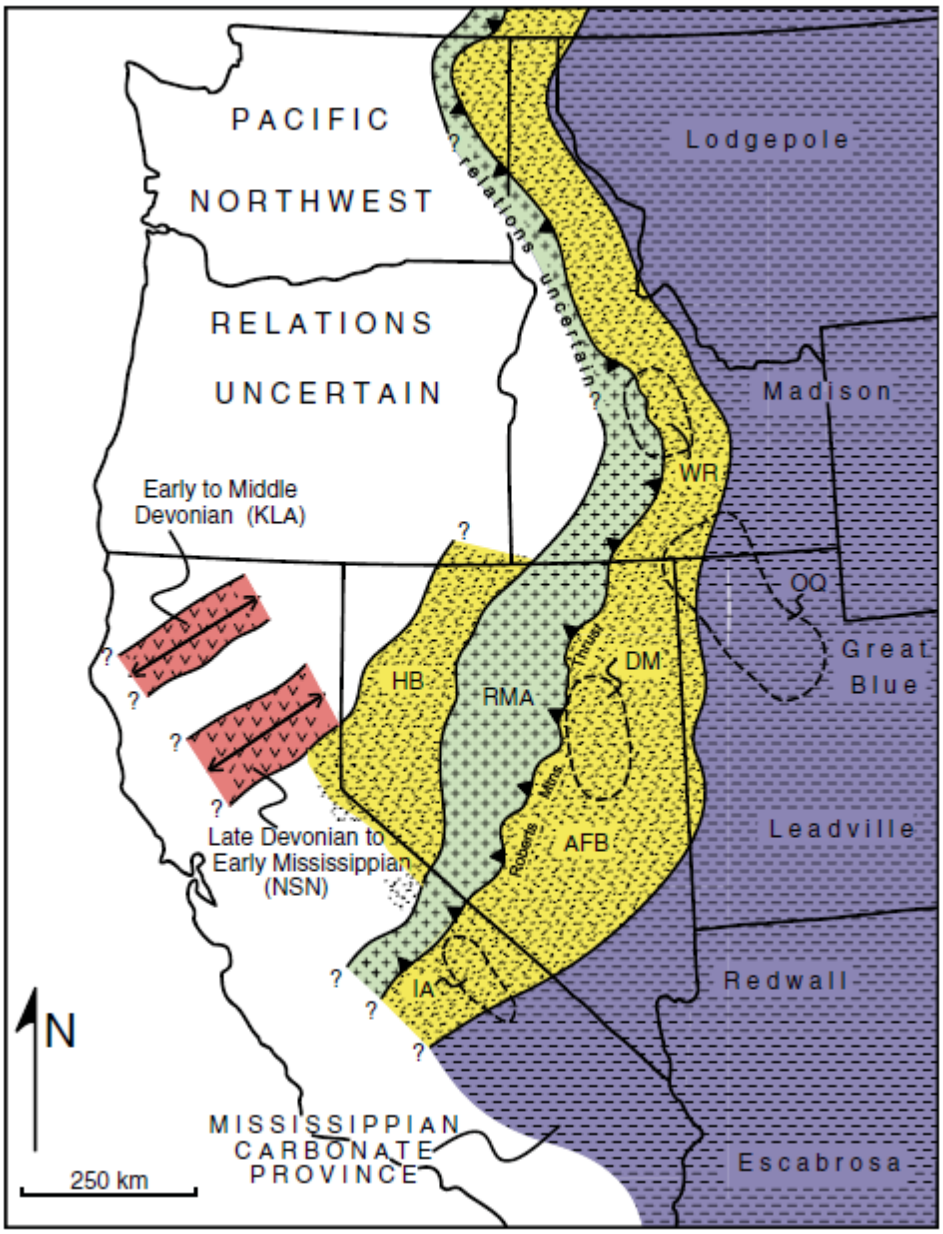

Figure 3.2.1: Syn-Antler-post-Antler paleotectonic map of the western United States and southwest margin of Canada (Dickenson, 2006)

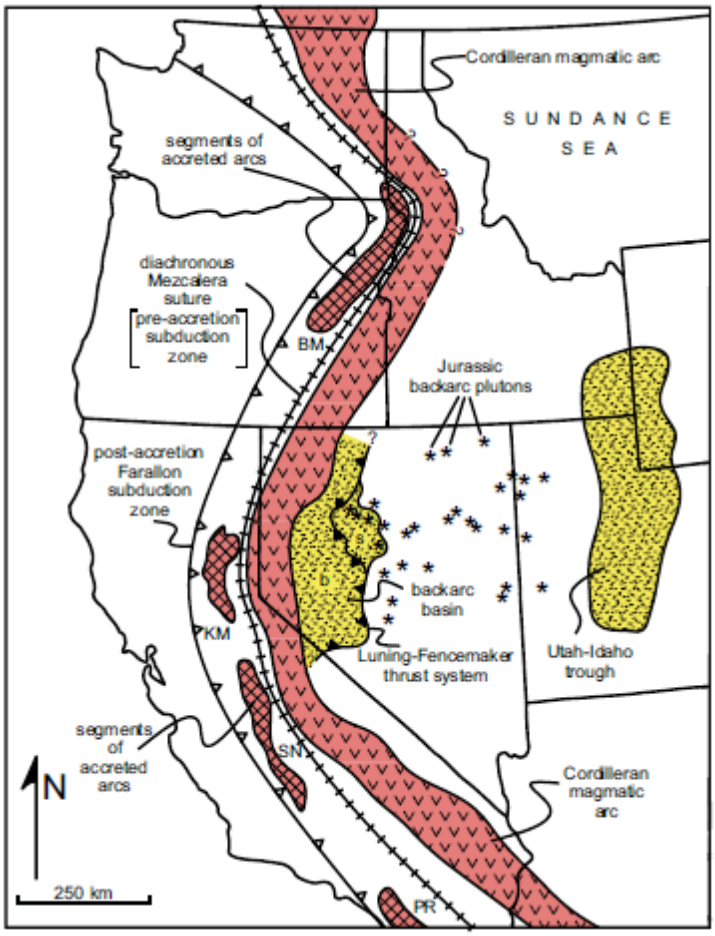

Figure 3.2.2: Triassic-Jurassic paleotectonic map of the western United States and southwest margin of Canada (Dickenson, 2006)

Interestingly, strike and dip data support that the anticline in the Yellow Zinc showing projects into the North Ridge (ED) Showing, potentially linking the two anomalies together (Appendix I). The Yellow Zinc-North Ridge anticline plunges to the southwest.

North-northeast and northeast normal faults are common throughout the district, which may have up to several thousand feet of offset. Some of the mapped faults include the Yellowhead Fault and Shickahomin Fault in the Pend Oreille Mine area, the Slate Creek Fault (spanning from the south of Metaline and continuing into the Libby Claim 1 map area), and the paralleling Lead Hill Fault (Dings et al., 1955). Secondary faults paralleling these structures are sometimes intruded by mafic dikes. In the map area, the Mystery Mountain Fault parallels both the Lead Hill and Slate Creek Faults. One north-northwest normal fault was mapped in the Bailey prospect and may or may not project into the Libby 1 Claim.

In the map area, two transverse faults were mapped within proximity to the Yellow Zinc Showing. The transverse fault within the Yellow Zinc showing area had measured kinematics indicating sinistral movement and one closest to the US boundary had measured kinematics indicating dextral movement.

Other paralleling structures were mapped by Morton (2012). The transverse faulting appears to offset the northeast trending structures, suggesting more recent movement.

3.3 Mineralization

Mineralization in the district occurs as massive sulfide replacement of carbonate breccias with pervasive dolomitization and silicification. Because many of the peritidal sequences were initially dolostones, distinguishing dolomitic hydrothermal alteration can be difficult to discern. Often, the dolostones that have been augmented by dolomitic alteration, along with the limestones, can be identified by recrystallized dolostone, dolospar, and zebra striping. Massive sulfides include iron pyrite, galena, and sphalerite. Often the massive sulfides occur as cement in the breccias and/or replace the carbonate clasts altogether. The clasts commonly demonstrate re-brecciation, suggesting reworking of the clasts during ore deposition and/or hydrothermal activity. Mineralization occurs in three horizons: Josephine, Yellowhead 1, and Yellowhead 2. The Josephine Horizon is typically characterized as being hosted by coarse-grained reddish-brown sphalerite and galena, is pervasively silicified, deficient in pyrite, and the mineralization is poddy and difficult to project. The Yellowhead Horizons, as the namesake implies, is hosted by yellow sphalerite, galena, and is abundant in pyrite and is commonly botryoidal. Unlike the Josephine Horizon, the Yellowhead horizons tend to follow stratigraphic controls. Historically, 12.7 million tonnes (Mt) of Joesphine-type ore with a grade of 1.3% Pb and 3.0% Zn and 730,000 tonnes of Yellowhead-type ore with a grade of 4.5% Zn and 0.5% Pb were produced in the Metaline Mining District prior to 1977 (St. Marie et al., 2002). At the time of St. Marie's (2002) publication, 5.5 Mt of ore remained at Pend Oreille with a grade of 7.2% Zn and 1.3% Pb.

St. Marie et al. (2002) report that the Josephine horizon is iron poor and coarse-grained and the Yellowhead horizon is iron-rich and fine-grained and were likely derived from two separate parent brines. The Josephine Breccia formed under cooler temperatures (150^{o}C) compared to the Yellowhead Horizon (200^{o}C). Despite these differences, the sulfur source originated from the same source. Pannalal (2007) dated the mineralization in the district to have occurred during the middle Jurassic (166±6 Ma), during the Nevadan Orogeny. This age dating contradicts the Mississippi Valley-Type mineralization model and suggests that mineralization occurred during Jurassic plutonic episode as replacement-style mineralization in dissolution carbonate breccias. The fluids likely favored structural features such as faults as conduits and concentrated in ideal traps and hosts, such as fold apexes and third, fourth, and fifth-order transgressive-regressive sequence cycles boundaries within the stratigraphic column (Cook et al, 2004).

Mineralization and alteration on the Libby Project share characteristics to that of the Pend Oreille Mine. Exposed carbonates are pervasively dolomitized and, in some places, silicified. In proximity to the Yellow Zinc showing, dolostone float with zebra striping (Figure 3.3.1) and pyrite float were found. As previously mentioned, mapped Josephine Lithofacies by Morton (2012) were investigated and did not correlate. Therefore, the Josephine Lithofacies were changed to hydrothermal-dissolution carbonate breccias on both the map and cross-sections A-A' and B-B' (Appendix I). In the western portion of the map area (northwest Libby 1 Claim), the ridgeling was traversed, although outcrop was sparse during the traverse. Cm float was found, so the map was modified from the Cmp to Cm and projected outward. More fieldwork is needed in order delineate the geology in that area. This modification, then changes

Figure 3.3.1: Black dolomicrite float with burrowing and a band of zebra striping.

the structural model from a syncline to also match the surface data showing the presence of an anticline.

3.4 Exploration Implications

Proposed reinterpretation of the stratigraphy, structure, and mineralization provides three key aspects to exploring the Libby Project:

1. Distinguishing favorable transgressive-regressive sequences such as those found at the Josephine, Yellowhead 1, and Yellowhead 2 horizons will aid in finding lead-zinc mineralization.
2. An anticline structural model is compelling in that these structural features are favorable traps for mineralization, much like the Pend Oreille Mine.
3. Replacement-style mineralization is an easier model to use for exploration, because the focus is narrowed to key structures and stratigraphy where each other intersect, rather than broad stratigraphic controls.

Transgressive and regressive sequences within the carbonate shelf margin and platform are becoming an important exploration tool in Nevada with respect to Carlin-style mineralization (Cook, 2005, Figure 3.1.1). During regressions, sometimes the carbonate platform is exposed to aerial to sub-aerial conditions and as a result, sections of the platform breaks off and forms turbidte flows along the shelf margin. Sometimes in the carbonate platform, karsting may develop during regressive sequences, and thus, developing ground preparation for the later mineralizing fluids to augment the breccias and deposit precious metals, much like Carlin-Type mineralization found in northeast Nevada (Cook, 2005; Hellbusch, 2010; Hellbusch, 2012). Most of the major deposits in Nevada are found within strata deposited along the carbonate shelf margin. However, Bald Mountain, West Pequop, and Long Canyon are positioned within the carbonate platform. As Cook (2005) demonstrates, many of the Carlin-Type deposits occur in third, fourth, and fifth-order cycles. It is proposed here, that this model could be applied to this project to help expand known mineralization within the claim block. In order to test this hypothesis, three drill holes are proposed: two at the Yellow Zinc Showing and one at the North Ridge Showing.

4. CONCLUSIONS AND RECOMMENDATIONS

In this study, the author proposes a newer stratigraphic model, placing mineralization within stratigraphic horizons where regressive low-stand depositional environments within the carbonate platform occurred and most importantly, where these horizons intersect favorable structures and traps for hydrothermal fluids. Therefore, focus should be placed at these horizons and more stratigraphic work needs to be done on the claim block. In order to accomplish this, several measured stratigraphic columns should be measured in the least faulted areas with a well-trained individual at identifying low stand sequences. Additional mapping should be completed with emphasis placed on sequence stratigraphy and alteration. While additional work needs to be completed, three drill holes within the Yellow Zinc Showing and North Ridge Showing can test the anticline structural model and continuity of mineralization between the two showings.

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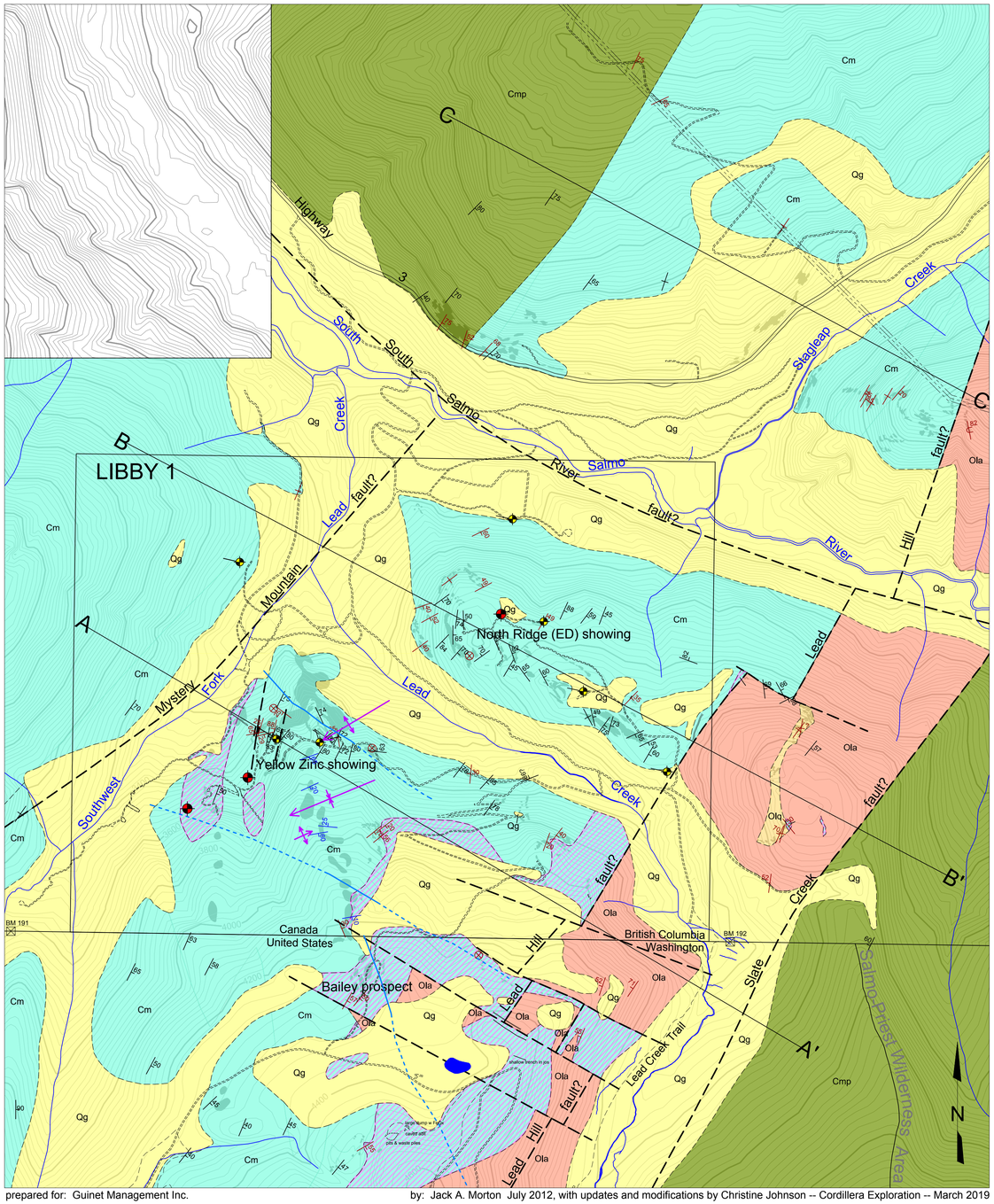
AUTHOR'S QUALIFICATIONS

As the author of this report, I certify that:

1. I received a B.Sc. in Geology from Fort Lewis College, Durango, CO in 2005 and M.Sc. in Geology from Idaho State University, Pocatello, ID in 2012.
2. I completed my M.Sc. thesis on surface mapping carbonate stratigraphy, measured stratigraphic columns, and structural geology on altered platform carbonates in northeast Nevada.
3. I have been employed as an exploration geologist since 2006 up until present. I have worked at the Pend Oreille Mine for Teck, logging exploration core, for one field season. Following this experience, I accepted a position with Agnico-Eagle, working on their flagship project: West Pequop. The West Pequop Project mineralization is hosts Carlin-Type mineralization in carbonate platform strata with both stratigraphic and structural controls. I have worked for Kinross Gold Corporation in the Republic area, exploring properties with low-sulfidation epithermal-style mineralization, skarn, and massive sulfide replacement-style mineralization in carbonates. I've also consulted for clients in the Republic area and in the Springdale Mining District, where mineralization is also hosted in massive-sulfide replacement-style mineralization hosted in carbonates. During the span of my career, most of my experience has been in drilling, logging core, field mapping, and conducting measured stratigraphic columns for exploration purposes.
4. I am a licensed geologist in the state of Washington and a registered professional geologist with the American Institute of Professional Geologists.
5. I have published peer-review papers, given public presentations, and co-lead field trips on the various projects where I have worked.

Christine Johnson
Geologist
20 March 2019

Exploration Work type	Comment	Days			Totals
Personnel (Name)* / Position	**Field Days (list actual days)**	**Days**	**Rate**	**Subtotal***	
Christine Johnson (Geologist)		4	$540.00	$2,160.00	
Vic Guinet		6	$300.00	$1,800.00	
			$0.00	$0.00	
			$0.00	$0.00	
			$0.00	$0.00	
			$0.00	$0.00	
				$3,960.00	**$3,960.00**
Office Studies	**List Personnel (note - Office only, do not include field days**				
Literature search			$0.00	$0.00	
Database compilation	Klepfer Mining Services GIS Mapping	1.0	$386.00	$386.00	
Computer modelling			$0.00	$0.00	
Reprocessing of data			$0.00	$0.00	
General research			$0.00	$0.00	
Report preparation	Christine Johnson	7.0	$540.00	$3,780.00	
Other (specify)					
				$4,166.00	**$4,166.00**
Transportation		**No.**	**Rate**	**Subtotal**	
Airfare			$0.00	$0.00	
Taxi			$0.00	$0.00	
truck rental		6.00	$100.00	$600.00	
kilometers		850.00	$0.40	$340.00	
ATV			$0.00	$0.00	
fuel			$0.00	$639.00	
Helicopter (hours)			$0.00	$0.00	
Fuel (litres/hour)			$0.00	$0.00	
Other					
				$1,579.00	**$1,579.00**
Accommodation & Food	**Rates per day**				
Hotel		10.00	$100.00	$1,000.00	
Camp			$0.00	$0.00	
Meals	day rate or actual costs-specify	10.00	$50.00	$500.00	
				$1,500.00	**$1,500.00**
Equipment Rentals					
Field Gear (Specify)			$0.00	$0.00	
Other (Specify)	10% management fee (Guinet Management, Inc.)			$1,120.00	
				$1,120.00	**$1,120.00**
Freight, rock samples					
			$0.00	$0.00	
			$0.00	$0.00	
				$0.00	**$0.00**
TOTAL Expenditures					**$12,325.00**



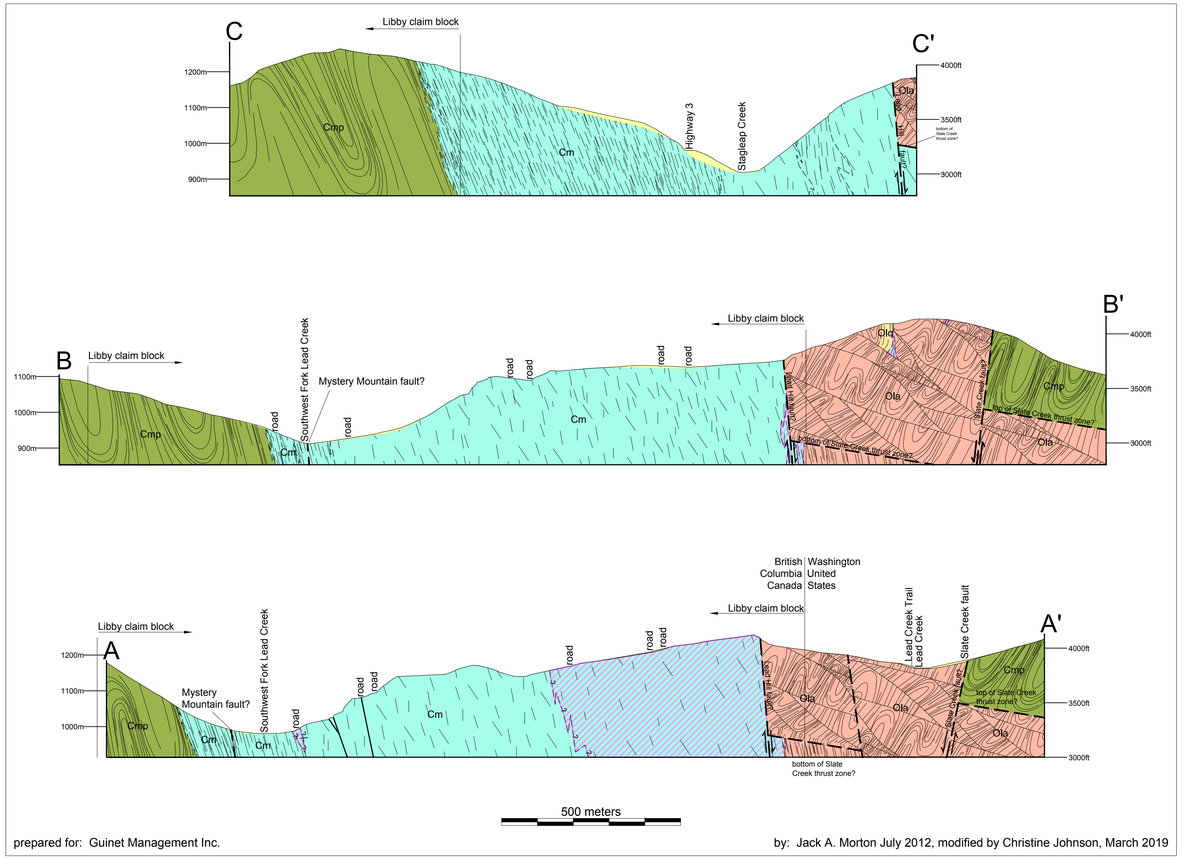
prepared for: Guinet Management Inc.

by: Jack A. Morton July 2012, with updates and modifications by Christine Johnson -- Cordillera Exploration -- March 2019

500 meters

Geologic Map of Libby Claim Blocks 1 and 2
Salmo Pb-Zn Area
Nelson Mining Division
Southeastern British Columbia

NTS 82 F
Latitude 49 N
Longitude 117 W



prepared for: Guinet Management Inc.

by: Jack A. Morton July 2012, modified by Christine Johnson, March 2019

Geologic Cross Sections A-A', B-B' and C-C'
Salmo Pb-Zn Area
Nelson Mining Division
Southeastern British Columbia

EXPLANATION

Lithologies

Observed in outcrop (darker shade)
Inferred from float or previous maps (lighter shade)

Pleistocene to Recent	Qg	Undifferentiated alluvial, glacial, glacio-fluvial and glacio-lacustrine unconsolidated sediment
Ledbetter (Active) Formation Lower Ordovician through Silurian	Ola	Black argillite
	Olq	Light to dark gray, fine-grained, supermature quartzite
Metaline (Nelway) Formation - Middle Cambrian through early Middle Ordovician	Cm	Dolomitic unit with interbedded dark gray dolomicrite, gray oolitic and oncolitic dolomitic packstone, and massively bedded light gray micrite. Local areas of hydrothermal brecciation and alteration. Upper contact with the Ledbetter Formation is disconformable and commonly contains paleokarsting of the Metaline Limestone.
Mallen Phyllite Middle Cambrian	Cmp	Medium to dark gray and black phyllite and limey phyllite

MAP SYMBOLS

- Bedding Attitude from literature - inclined, overturned, horizontal, vertical
- Bedding Attitude observed - inclined, overturned, horizontal, vertical (Morton 2012)
- Bedding Attitude observed (Johnson 2019)
- Contact, inferred (Morton, 2012)
- Fault, measured (Morton, 2012)
- Fault, inferred (Morton, 2012)
- Fault, inferred (Johnson, 2019)
- Fold axis (Johnson, 2019)
- Hydrothermal Brecciation
- BM 192 — Border Monument
- Ramrod Drill Hole Collar, with inclination
- Proposed Drill Hole Collar Location

MINERAL ASSESSMENT TECHNICAL REPORT	
LIBBY PROJECT	FIGURE 3
CMPLD: Jasper Geographics	Guinet Management, Inc.
SCALE: As Shown	GEOLOGIC MAP & CROSS SECTIONS
DATE: March 2019	Salmo, British Columbia, Canada