

**TECHNICAL REPORT**

**THE SLOCAN SILVER CAMP  
SANDON,  
BRITISH COLUMBIA**

**Location: Selkirk Mountains  
NTS 082F/14 and 082K/03**

**Prepared for**

***Klondike Silver Corp.***

**By**

**Trygve Höy (PhD, P.Eng)**

**2450 Dixon Road**

**Sooke, B.C., V9Z 0X6**

**June 28, 2016**

## Table of Contents

1. Summary.....	4
2. Introduction.....	5
3. Reliance on other experts.....	5
4. Property description and location.....	6
5. Accessibility, climate, local resources, infrastructure and physiography.....	9
6. History.....	10
Pre 1999 .....	10
2005 to present .....	12
Summary .....	16
7. Geological setting and mineralization.....	16
Regional geology .....	16
Camp geology .....	18
Mineralization .....	18
Hinckley-Idaho.....	21
Wonderful-Alamo.....	21
Yakima-Sunshine.....	23
Silvana-Ruth-Hope.....	23
Silversmith.....	24
Richmond-Eureka.....	25
Canadian-Ivanhoe.....	25
8. Deposit types .....	26
9. Exploration.....	27
Regional exploration .....	27
Jackson basin-Stenson .....	27
Payne mine area .....	28
Cody Creek area .....	28
Hewitt-Van Roi .....	29
Camp exploration .....	29
Wonderful.....	29
10. Drilling.....	32
Summary .....	34
11. Sample preparation, analyses and security.....	34
12. Data verification.....	34
13. Mineral processing and metallurgical testing.....	35
14. Mineral resource estimates.....	35
15. Mineral reserve estimates.....	35
16. Mining methods.....	35
17. Recovery methods.....	36
18. Project infrastructure.....	36
19. Market studies and contracts.....	39
20. Environmental studies, permitting and social or community impact.....	39
21. Capital and operating costs.....	40
22. Economic analysis.....	40
23. Adjacent properties.....	40
Willa (082FNW071) .....	40
Enterprise (82FNW148) .....	41
Whitewater (082KSW033) .....	41
Ainsworth camp .....	41
Tillicum (082FNW234) .....	41

## Slocan Silver Camp

---

24. Other relevant data and information.....	42
25. Interpretation and conclusions.....	42
26. Recommendations.....	43
Phase 1: Underground development.....	43
Phase 1: Surface exploration.....	43
Phase 1: Geological modeling .....	44
Cost estimates .....	44
27. References.....	45

### Figures

1. Location map.....	7
2. Location map showing claims.....	8
3. Regional geology of the Slocan camp, Sandon area.....	17
4. Geological map of the Slocan Silver Camp.....	20
5. Main vein systems in the Slocan Silver camp; Klondike Silver tenures.....	22
6. Trench and drill hole locations, Wonderful property .....	30

### Tables

1. Past-producing mines currently owned by Klondike Silver Corp.....	13
2. List of recent (2006-2012) Assessment Reports filed by Klondike Silver Corp.	15
3. Raise assay results, Wonderful vein, between Levels 3 and 4.....	31
4. Summary of 2005 drill holes, Wonderful property .....	32

### Appendices

1. Certificate of qualified person: Trygve Hoy
2. Mineral tenures held by Klondike Silver showing their size and expiration date
3. Crown-granted claims held by Klondike Silver Corp.
4. Permit: Tailings pond, dated June 3, 2015

### Photos

1. View of the historical town of Sandon .....	7
2. View to the north from Highway 6 just south of Silverton showing Idaho Peak	9
3. View downs Sandon Creek, with Ruth-Hope mine portal area on the near slope	10
4. Folded metasediments of the Triassic Slocan Group .....	19
5. Samples of vein, taken from underground .....	19
6. View of the Klondike Silver mill site at Sandon .....	37
7. View looking up Carpenter Creek valley, coarse ore bin is in the foreground	37
8. Exploration and mine equipment; backhoes stored at the mill site .....	38
9. Aerial view of tailings pond .....	38
10. No. 1 pond, June, 2016; remedial work in progress includes brush clearing along edges .....	39

## 1. Summary

The Slocan Silver Camp is centered on the town of Sandon which is located 53 kilometres north of Nelson in southeastern British Columbia. Sandon is 15 kilometres east of New Denver along an all-weather gravel road that branches off paved Highway 31A.

Klondike Silver claims cover approximately 100 square kilometers and includes most of the historical past-producing silver-lead-zinc prospects of the area, including the Silvana Mine and the fully operational 100-tonne per day mill situated at Sandon. All mineral tenures are wholly owned by Klondike Silver Corp. (see Appendix 2); Klondike Silver also has rights to crown granted claims (Appendix 3) and has optioned a further 39 crown-granted claims and mineral tenures.

The property is in the Slocan Mountains, between Kootenay Lake to the east and Slocan Lake to the west. This is a mountainous area and relief is high with steep tree-covered slopes and tight V-shaped valleys.

The geology of the area is complex, with a sequence of tightly folded and faulted metasediments of the Late Triassic Slocan Group intruded on the south side of the property by mainly granodiorites of the Middle Jurassic Nelson batholith. Mineralization in the camp comprises a series of generally east to northeast-trending argentiferous galena-sphalerite-pyrite-quartz-carbonate veins. These appear to follow shears that typically extend from the Slocan metasediments into the Nelson batholith. Gold content is generally low within these veins, but occasionally reaches values of several grams/tonne.

Veins of the Slocan Camp were discovered in the early 1890s. Since then, production has come from more than 100 mines, commonly owned and operated by a number of separate companies or individuals. During the peak of production, continuing through to the early 1900s, the town of Sandon became a major mining and business center with a population of over 2,000. In total, more than 1 million tonnes of ore were processed from the mines in the Slocan district, with recovery of 1,397 million grams of Ag, 184 million kg Pb, 122 million kg Zn as well as recovery of some gold and cadmium (summarized in Table 1).

Klondike Gold Corp. consolidated most of the past producing mines and prospects in the camp and in 2004 began an exploration program on the Wonderful property near the center of the camp. The focus of this exploration by Klondike Gold, and subsequent owner (2005) Klondike Silver Corp., was to develop near-surface reserves that could be processed at the mill at Sandon. Hence, initial exploration involved soil sampling on established grids, followed by trenching, then shallow drilling. As well, a VLF-EM geophysical survey on the Wonderful claim showed the importance in this type of survey in defining mineralized structures. Exploration also began on claims in the district that are not contiguous with the main Slocan Silver Camp. This work, on the Stenson, Van Roi and Hewitt prospects, included prospecting, locating old workings, soil sampling and geological mapping.

Considerable underground work, including rehabbing old workings, extending exploration drifts, underground drilling and sampling, and bulk testing and processing of ore was done by Klondike Silver until 2013. The mill was refurbished, and is still operational, under care and maintenance at the present time.

## 2. Introduction

This report has been prepared by the author for Klondike Silver Corp. at the request of the Corporate Finance Department of the B.C. Securities Commission in a letter dated November 12, 2015 to Mr. Tom Kennedy, President and CEO of Klondike Silver Corp. Klondike Silver Corp. is a mining and exploration company that is listed on the TSX Venture Exchange. The main properties of the Company are in the Slocan Silver Camp in southeastern British Columbia. In addition to crown granted claims and mineral tenures, the Company owns an operational mill in Sandon that is rated to process up to 100 tonnes per day, producing both zinc and lead concentrates.

Much of the geological data and the production data for this report have been obtained from B.C. provincial government reports. Other sources of geological data include regional maps by the Geological Survey of Canada, a Ph.D. thesis by George Beaudoin, several papers published in refereed scientific journals, a number of assessment reports that have been filed by Klondike Silver Corp. between 2006 and 2013, and unpublished reports by past operators in the area. These data are listed in the “References”. As well, some information regarding operation of the mill and underground exploration between 2010 and 2013 have been obtained through discussions with personnel of Klondike Silver Corp.

The author visited the property, including the mill, most recently on June 8-9, 2016. At that time the mill was under care and maintenance.

## 3. Reliance on other Experts

As noted above, the author has used extensively sources of information that are listed in the “Reference” section of this report and believes that this material is reliable as he has worked as an independent contractor at the site, managed exploration programs in the camp for Klondike Gold and Klondike Silver from 2005-2010, and written or co-authored many of the recent assessment reports. However, a considerable part of the report, particularly that pertaining to the mill, was obtained through discussions with Len Palmer, mill manager and current caretaker at the Sandon mill site and from documents, including permits, news releases and internal reports supplied by Klondike Silver Corp. The author is confident that this information is accurate and reliable as he observed the mill in operation at numerous times in recent years (2004-2010) and visited the site for two days in June, 2016. The author acknowledges discussions with D. Makepeace (P.Eng.), former chief geologist, Silvana Mine, Dickenson Mines Ltd. (1983-1989) regarding exploration and mining operations at the site, and is of the belief that this information is accurate and current.

The author has not independently verified the legal status of the property, including that of the crown granted claims or optioned properties. However, the ownership of Klondike Silver claims has been verified by examination of public records that are maintained on line by the Mineral Titles Branch of the Ministry of Energy and Mines. Information regarding permits, licenses, environmental concerns, and option agreements have been supplied to the author by Klondike Silver Corp. and have not been independently verified. The mill, camp infrastructure, or the Tailings disposal site descriptions are taken mainly from discussions with personnel of Klondike Silver Corp. and from permits and licenses provided by Klondike Silver Corp. The author is confident that the information provided in this report is accurate.

### 4. Property description and location

The Slocan Silver Camp is centered around the town of Sandon which is located 53 kilometres north of Nelson in southeastern, British Columbia (Figure 1; Photo 1). Sandon is 15 kilometres east of New Denver along an all-weather gravel road that branches off paved Highway 31A.

Appendix 2 shows a list of all tenures held by Klondike Silver Corp. in the Slocan Camp, their size and expiration date. These claims cover an area of 11,237 ha or approximately 112 square kilometers (Figure 2) and include most of the historical past-producing silver-lead-zinc prospects and past producers in the camp, including the Silvana Mine and the fully operational 100-tonne per day mill situated at Sandon. All claims are 100% owned by Klondike Silver Corp. and, as shown in Appendix 2, and are in good standing.

Klondike Silver Corp. has an option agreement with Locke Goldsmith (amended April 11, 2013) whereby Klondike Silver can earn a 100% right, title and undivided interest in 39 tenures and crown grants, shown in Figure 2, by paying L. Goldsmith \$200,000 in staged payments and 120,000 common shares of Klondike Silver Corp., and by incurring an aggregate of \$400,000 in exploration expenses on the subject property. The optionor, Locke Goldsmith, is entitled to receive a royalty equal to the 2% of the net smelter returns. Klondike Silver Corp. may at any time purchase 100% of the Royalty Interest for \$250,000.

Crown granted claims that Klondike Silver has purchased or owns are shown in Appendix 3 and illustrated in Figure 2. These cover an area of 2,159 ha or approximately 21.6 square km. They include crown grants in the central part of the Slocan Camp, and a number in the Hewitt-Van Roi area in the southwest part of the camp (Figure 2). They incur fees of approximately \$3,600/year and are currently in good standing.

Klondike Silver claims, including the optioned claims, cover an area that extends from approximately 5527000N to 5542500N and from 475000E to 491000E east (UTM coordinates, Zone 11, Nad 83). However, as shown on Figure 2, not all of this ground is held by Klondike Silver Corp. and not all claims are contiguous. The Stenson group is located approximately 7 km northeast of Sandon and a claim group 7 km to the southeast covers a number of isolated silver-lead vein occurrences. As well, claims covering the past producing Hewitt and Van Roi deposits, in the southwest part of Figure 2, are not contiguous with those of the main Slocan camp. As the Hewitt and Van Roi claims are not considered part of the main Slocan Silver Camp, they are not discussed in detail in this report.

Klondike Silver Corp. has received a permit, dated June 3, 2015, from the B.C. Ministry of Environment to:

*“discharge effluent to tailings impoundments from a lead-zinc ore dressing plant located near New Denver, British Columbia, subject to the terms and conditions listed below”*

Some restrictions in the permit include the maximum rate of discharge, the character of the discharge, retaining a qualified geotechnical engineer to assess the long-term integrity of the tailings pond, and some required improvements that are noted in Section 18, "Project infrastructure". The complete text and list of restrictions of the permit is given in Appendix 4. The author is not aware of any other environmental liabilities on the property.

# Slocan Silver Camp

Six water license permits have been obtained for mining-processing, camp work and domestic work at the mill site. These outline the quantity of water allowable for use and the stream sources. As far as the author is aware, the status of these permits are all current.

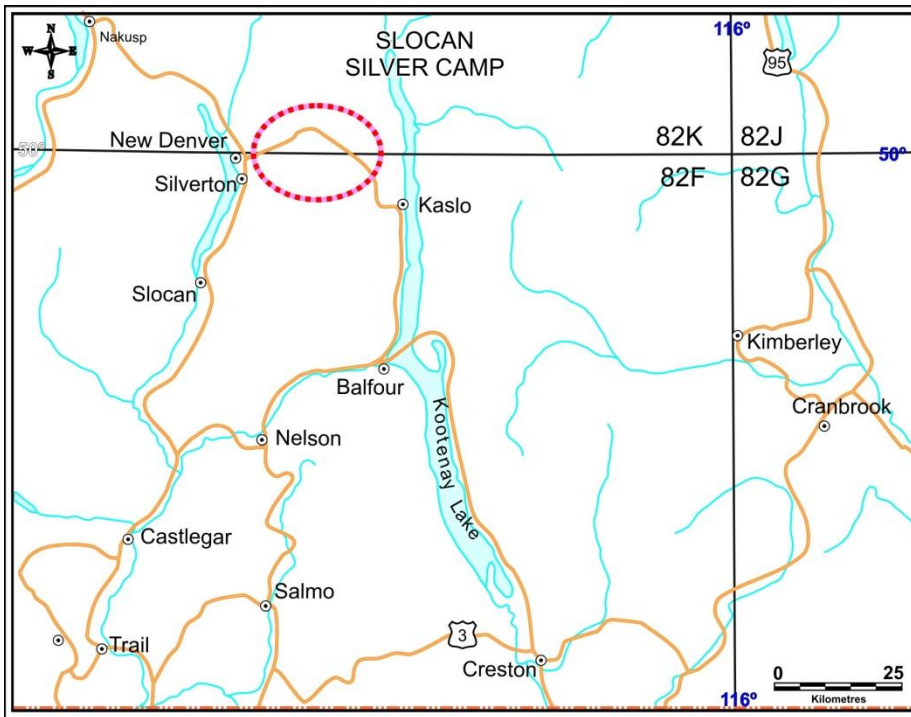


Figure 1: Location map



Photo 1. View of the historical town of Sandon, with Carpenter Creek in the foreground.

# Slocan Silver Camp

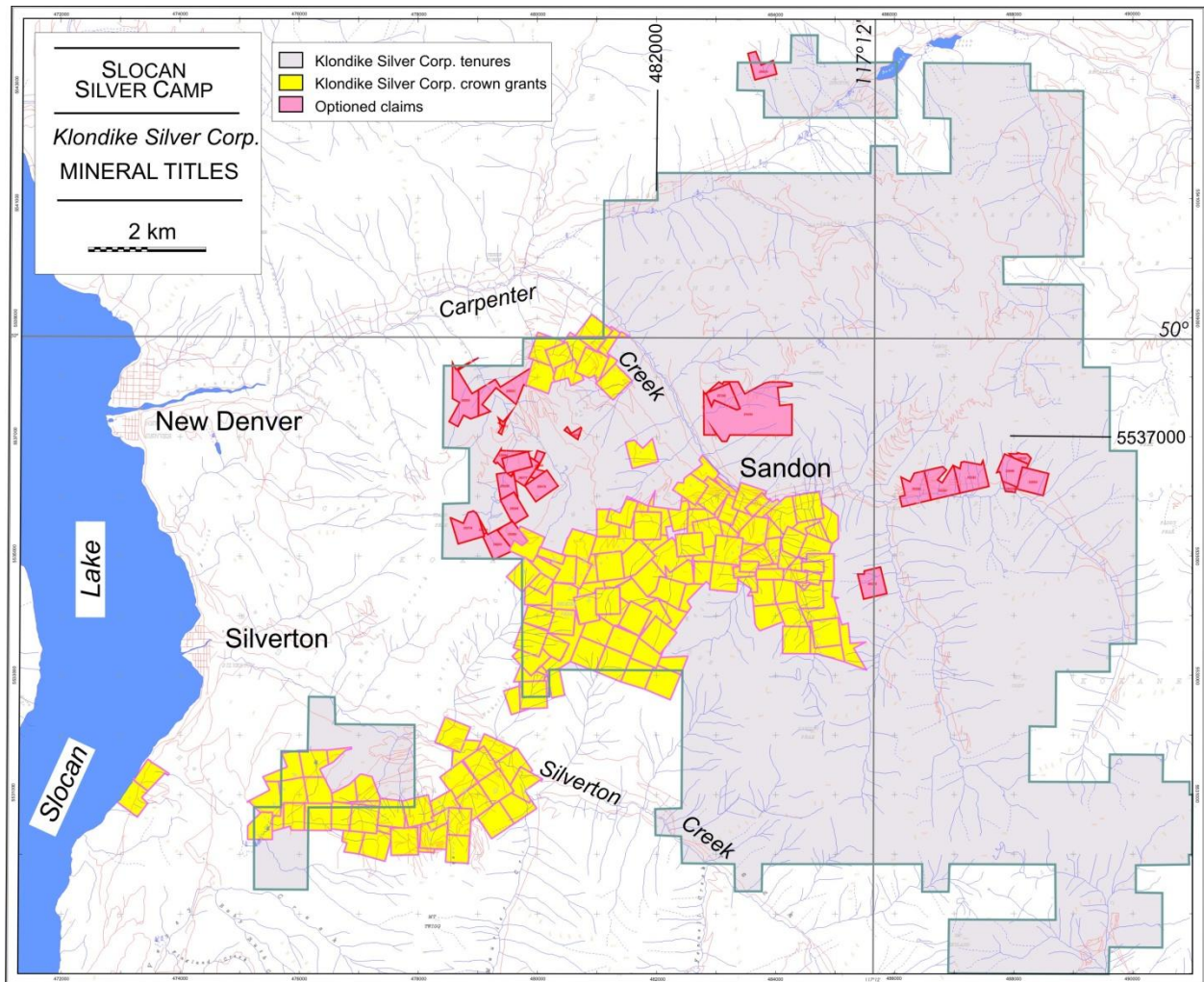


Figure 2: Location map, showing claims and tenures held by Klondike Silver Corp.; Appendices 2 and 3 list tenures and crown grants.



### 5. Accessibility, climate, local resources, infrastructure and physiography

The subject property is in the Slocan Mountains, between Kootenay Lake to the east and Slocan Lake to the west (Figure 1). This is a mountainous terrane and relief is high with steep tree-covered slopes rising to elevations approaching 2500 meters above sea level (Photos 2, 3). A large part of the area is covered by thick overburden, typically fairly coarse glacial till or scree slopes. Two major creeks, Carpenter and Silverton, drain the area both flowing west into Slocan Lake. The area is heavily wooded, with dense second growth of hemlock, cedar, fir, balsam and spruce. The climate is usually moderate year round; snow conditions vary from year to year, but snow generally arrives on the summits in early October and typically does not completely disappear, even in valley bottoms, until late April.



Photo 2: View to the north from Highway 6 just south of Silverton showing Idaho Peak in the distance. The Slocan camp is on the far side of Idaho Peak, and Klondike Silver mineral tenures descend down slope to the valley bottom in the middle distance.

Access to the camp is excellent. A paved provincial highway (6) connects New Denver to the cities of Nelson and Castlegar, both approximately 100 km to the south, and Revelstoke to the north at the TransCanada Highway. These towns are modern, thriving communities that support considerable industry. Sandon, now mainly a ghost town with only a few permanent residents, is located near the center of the camp. It is accessed by an all-weathered paved road east from New Denver (provincial highway 31A), then a well-maintained 4 km gravel road. Castlegar is 25 km north of Trail, the location of the Teck Resources lead-zinc smelter where the lead and zinc concentrates from the Sandon mill were sent.

## Slocan Silver Camp

---

The Klondike Silver mill and tailings pond is on land owned by Klondike Silver Corp. Water is available from several small tributaries and creeks that enter Carpenter Creek, and water-use licenses are current. The mill is connected to the BC Hydro power lines.



Photo 3: View down Sandon Creek with Ruth-Hope (Silvana 4000 level) mine portal on the near slope.

Access throughout the Slocan camp area is generally good, provided by numerous exploration and mining roads that extend from valley bottoms to locally above tree line. Many of these are passable by both 2- or 4-wheel drive vehicles while others need some brushing out.

The towns of Nelson and Castlegar, and the Slocan area in general, have had long histories of resource development that have resulted in construction of an extensive road infrastructure, good power grid coverage and historically a skilled mining and exploration workforce.

## 6. History

### 6-1 Pre 1999

The Slocan camp has had an extensive history of exploration, development and mining that dates back to 1892 with initial discovery of silver-rich lead-zinc veins. Most of the following history relates to the "Main Lode" vein system only.

The Ruth claim, and three adjacent claims, the Hope, Wyoming and Ruth Fraction, were subsequently staked and combined to form the Ruth Group. Development work was begun in several adits on the Ruth vein. In September, 1897, Ruth Mines Limited was registered in British Columbia and four claims, the Despair, Ruth, Hope and Ruth Fraction (Lots 840-842,

## Slocan Silver Camp

---

1845 respectively) were Crown-granted, followed by the Wyoming, Zuma, Aurora No. 2, Suburban Fraction, Aurora Fraction and Zuma Fraction claims (Lots 754, 2029-2031, 2036, 2037 respectively) in 1898. A mill with a capacity of 4 tons per hour was built in 1899 and modified to recover zinc in 1904. The mine operated steadily until about 1916. The known mineralization of the Ruth and Hope veins were largely worked out during this period. Lessees worked part time during the following years.

In April 1923, 14 Crown-granted claims were incorporated as the Ruth-Hope Mining Company, Limited. The Ruth No. 2 or Stewart vein was discovered and worked at this time. The company rehabilitated the old mill and added a 50-ton per day flotation unit in 1928. Work by the company ceased in 1930. The underground workings to this date extended over a vertical range of 427 metres and comprised nearly 8 kilometres of drifts and crosscuts. The Ruth vein had been explored by 5 adits. At higher elevations, southwest of the Ruth, five adits explored the Hope vein.

Lessees carried on small-scale intermittent work from 1930 to 1944. Kelowna Exploration Company Limited optioned seven of the Ruth- Hope claims and adjacent ground in 1946. Crosscutting and diamond drilling was done from the Ruth No. 5 level to explore for extensions of the Silversmith vein. The option was given up in 1948. Kootenay Belle Gold Mines Limited optioned the property in 1951 and shipped ore from the mine dumps.

In 1952, Carnegie Mines Limited purchased the Ruth-Hope group and adjacent ground, totaling 46 Crown-granted claims. Intermittent exploration work was done in various levels of the mine and lessees continued to work part time. The Silmonac Syndicate was organized in 1963 to further explore ground west of the Silversmith property along 4000 level, leading to discovery of the Main lode west of the Ruth-Silversmith fault zone. This was drifted on westward for about 183 metres but mineralization was below ore grade. Silmonac Mines Limited was incorporated in November 1963 to continue the exploration work. During 1964 the Ruth No. 5 level was extended 317 metres and 98 metres of raising and 1528 metres of diamond drilling were done. Following operations by Silmonac Mines, Carnegie Mining explored below the old Ruth workings by crosscutting from No. 5 level and diamond drilling; this work failed to locate the downward extension of the Ruth lode. Surface stripping was done on the Ruth Fraction claim in 1965.

Development work was resumed on the property in October 1968 in a new adit that was collared at the 4425 level at the north edge of the Minnie Ha Ha claim. During 1968-69 the crosscut adit was driven southerly some 853 metres to the lode that was explored along strike for 305 metres and down dip for 60 meters. By April 1970 sufficient reserves had been outlined to justify production and the 100-ton per day mill, owned by Carnegie Mining Corporation, was rented and put back into production. During the following 25 plus years exploration and mining down dip at the east end of the mine located additional mineralized zones.

Drilling in 1979 cut ore-grade intersections at elevations from 1292 to about 1340 metres and production through the 4000 level began. A raise was driven to connect the 4000 and 4625 level workings. Silvana amalgamated with Dickenson Mines Limited under the name of Dickenson Mines Limited. The property was subsequently sold to Treminco Resources, and the Silvana was finally closed in April 1993. Production from the Silvana mine between 1913 and 1993 yielded about 242 tonnes of silver, 28,691 tonnes of lead, 26,299 tonnes of zinc and 72 tonnes of cadmium from 510,964 tonnes mined.

## Slocan Silver Camp

---

A summary of historical production from the main producing mines in the Slocan Camp is given below in Table 1.

### **6-2 2005 - Present: Klondike Silver Corp.**

In May 1999, Klondike Gold Corp. acquired the Silvana and Hinckley mines from Treminco Resources Ltd. Selective mining on the 4625 level commenced in the fall of 1999 and a total of 3577 tonnes of ore was processed in the mill yielding 138 tonnes of lead, 114 tonnes of zinc and 1443 kg of silver.

In 2005, Klondike Gold Corp. completed an arrangement with its wholly owned subsidiary, Klondike Silver Corp., whereby Klondike Gold shareholders received 5 new common shares of the company and one common shares of Klondike Silver for each 5 shares held of Klondike Gold on September 23, 2005. Klondike Silver held the Slocan Mining camp, and became a reporting issuer effective October, 2005.

Klondike Silver has since substantially increased its land holdings in the Slocan camp, mainly through outright purchase, option agreements or staking. The mill continued to be intermittently operational until 2013 and has been on maintenance since then.

Exploration, both surface and underground, as well as some underground development, continued by Klondike Silver Corp. from their acquisition of the claims until 2014. A Klondike Silver press release dated January 29, 2013 reviews the underground production from the Silvana mine, stating that:

*“In 2012, Klondike Silver Corporation conducted exploration and bulk testing at the Silvana mine. The mill was operating in 10-hour shifts, seven days a week, processing approximately 40 tonnes of material per day. Exploration continued at the 4625 and 4755 levels and confirmed the westward continuation of the main lode structure at the 4625 level. By January 2013, underground mining operations had increased and the mill was continuing to produce 40 tonnes per day from the 4755 level. Two concentrates produced by the mill were a silver-lead concentrate holding approximately 3110 to 3887 grams of silver per dry tonne and a silver-zinc concentrate holding approximately 1555 to 1866 grams of silver per dry tonne. Operations were briefly interrupted to reroute power, water and air systems at the 4625 and 4755 levels, but production resumed in March 2013. Mining resumed in the Silver vein, which started as a 0.9-metre seam but had widened to a 1.8-metre seam with consistent mineralization.”* (Press Release, Klondike Silver Corp., January 29, 2013).

Considerable surface exploration was undertaken by Klondike Silver Corp. from 2005 to 2013, and the following summary is taken from Assessment reports filed by Klondike Silver and shown in Table 2.

Surface exploration work in the northeastern part of the claim group, in the Jackson Basin and Stenson mineral occurrence areas, from 2005 through to 2008, included several small soil geochemical surveys, geological mapping, prospecting and a ground VLF-EM geophysical survey over known Stenson vein mineralization (Assessment reports 28485, 30081, 30323, 31034 and 31045). The programs were successful in locating surface extensions of known veins but follow-up trenching, restricted to a single trench east of the Stenson occurrence failed to reach bedrock (Assessment report 31566). No further work was done on these eastern tenures in part because of their distance from the mill at Sandon and in part because of their limited < 1m widths exposed at surface.

## Slocan Silver Camp

Name	BC Minfile	Mined (tonnes)	Milled (tonnes)	Ag (g)	Pb (kg)	Zn (kg)	Au (g)
Standard	082FNW180	746,235	87,638	278,230,004	39,690,541	49,361,401	20,280
Silvana	082FNW014	510,964	499,303	242,982,741	28,691,304	26,299,854	
Silversmith	082FNW053	355,110	190,723	226,107,767	32,524,265	11,751,185	37,509
Van Roi	082FNW064	284,706	40,978	86,690,377	8,091,338	7,600,657	9,549
Violamac	082FNW204	149,502	101,239	129,127,274	21,746,099	14,225,991	76,833
Hewitt	082FNW065	112,573	22,582	59,624,427	2,708,636	1,770,177	3,673
Payne	082KSW006	110,604	?	116,386,525	17,376,637	1,024,416	
<i>Mammoth</i>	<i>082FNW060</i>	<i>63,865</i>	<i>61,152</i>	<i>25,670,119</i>	<i>2,622,103</i>	<i>4,158,025</i>	<i>3,598</i>
Ruth-Hope	082FNW052	60,575	?	76,946,676	10,122,529	1,605,717	7,712
Ivanhoe	082FNW057	40,293	1,854	14,204,149	2,366,970	330,300	31
Richmond-Eureka	082FNW054	36,650	?	24,993,034	2,322,882	761,064	590
Wonderful	082FNW043	28,806	?	13,057,008	1,619,509	1,214,509	6,873
<i>Idaho</i>	<i>082FNW007</i>	<i>26,581</i>	<i>1,105</i>	<i>48,811,960</i>	<i>2,124,884</i>	<i>225,235</i>	<i>715</i>
Queen Bess	082FNW010	16,573	?	42,980,739	8,558,538	19,244	849
Wakefield	082FNW059	8,943	?	6,032,458	1,111,226	5,568	
Jackson	082KSW015	5,847	17,476	3,106,070	1,888,550	1,407,175	373
Hinckley	082FNW013	2,011	1,905	778,446	147,552	203,603	481
Canadian	082FNW197	855	?	2,439,968	374,301	17,217	31
Total production		2,560,693	1,025,955	1,398,169,742	184,087,864	121,981,338	169,097

Table 1: Historical production data from the main producers in the Slocan camp, taken from BC Minfile; the Mammoth and Idaho are not on ground held by Klondike Silver Corp.

In 2007 and 2008, limited exploration in the Cody Creek area along the inferred eastern extension of the Silversmith and Richmond-Eureka veins included a soil sampling program and minor prospecting (Assessment reports 30335, 31036). The soil programs indicated lead, zinc and silver anomalies extended to the east, on the east side of Cody Creek, supporting the known dominantly northeast trends of the main veins in the Slocan camp. In 2009, Klondike Silver continued exploration on the east side of Cody Creek with trenching over a small VLF anomaly which discovered a breccia zone with iron carbonate alteration but no mineralization (Assessment report 32249). It was recommended that trenching should be shifted to the west

## Slocan Silver Camp

---

side of the creek where several lead-zinc vein showings had been discovered by prospecting earlier that season. This work has not been done, in part because of difficulty in road access.

A fairly extensive program of soil geochemistry, mapping, trenching and sampling began in the Payne deposit area in 2008 on the steep slopes north of Carpenter Creek and Sandon. The Payne mine (BC Minfile 082KSW006) produced 110,664 tonnes of ore until its closure in 1939, and several other deposits in the immediate area, including the St. Keverne and Ocean mines, also recorded limited production (BC Minfile 092KSW007, 082KSW005). Soil geochemical programs defined large, broad northeast-trending anomalous lead and zinc zones that appear to align with the trend of the Payne lode. A second northeast trending zone of anomalous lead and zinc soil geochemistry was identified approximately 1200 m to the northwest. It was considered of interest as it aligned with mineralization at the Cinderella occurrence on the south side of Carpenter Creek, but there is no indication that mineralization is continuous or extends to this anomalous area.

Follow up trenching over the broad southeastern lead soil anomaly in 2009 and 2010 failed to intersect significant mineralization, although northeast-trending faults and shears, with quartz and carbonate alteration, were exposed (Assessment reports 31631, 32432). It is possible that the broad geochemical anomalies reflect elevated values of metals inherent in the silty argillites, and a more effective trenching program should be directed at point anomalies which may be more indicative of narrow vein mineralization.

Exploration on the Hewitt-Van Roi property by Klondike Silver Corp., located approximately 6 km southwest of the main Slocan Silver camp, included geological mapping, prospecting, ground geophysics, trenching and diamond drilling (Assessment report 31518). Most of this work was concentrated to the west of the Hewitt mine, in an area of anomalous lead-zinc soil geochemistry coincident with a west-trending VLF-EM anomaly. As these anomalies were on strike and on the same trend as the mineralized veins in the Hewitt and Van Roi they were initially trenched, generally unsuccessfully due to thick overburden. Subsequently, several test pits were excavated but these failed to discover mineralization. In October, 2009, four drill holes, for a total length of 480 meters, were drilled in an attempt to intersect the projected extension of the Hewitt-Van Roi system. One of these holes did intersect what was assumed to be the controlling fault structure, but did not intersect significant mineralization.

In June, 2010 Gold Jubilee Capital Corp. entered into an option agreement with Klondike Silver Corp. whereby Gold Jubilee would acquire an undivided 51% right, title and interest in the Hewitt-Van Roi property by paying \$320,000 and issuing 300,000 common shares to Klondike Silver and incurring at least \$1,500,000 exploration expenses. The option agreement was terminated in May, 2012 and all rights to the Hewitt-Van Roi were returned to Klondike Silver.

## Slocan Silver Camp

---

<b>Report</b>	<b>date</b>	<b>authors</b>	<b>property</b>	<b>work done</b>
28485	2006	Hoy, T.	Stenson	soil geochemistry
30081	2008	Hoy, T.; Belton, B.A.	Stenson	ground geophysics
30335	2008	Good, D.	Cody Creek	soil geochemistry
31036	2009	Hoy, T., Good, D.	Cody Creek	Soil geochemistry
30323	2008	Good, D. Hoy, T.	Jackson	soil geochemistry
31026	2009	Seabrook, M. Hoy, T.	Mt. Con (Cody)	soil geochemistry prospecting
31028	2009	Seabrook, M. Hoy, T.	Payne	soil geochemistry
31034	2009	Seabrook, M. Hoy, T., Belton, B.A.	Jackson basin Jackson	soil geochemistry, prospecting geological mapping
31045	2009	Seabrook, M. Hoy, T.	Jackson basin Stenson	ground geophysics geological mapping
31440	2010	Seabrook, M	Wonderful	underground drilling
31481	2010	Seabrook, M Hoy, T.	Sandon Peak	soil geochemistry geological mapping
31518	2010	Seabrook, M. Hoy, T.	Hewitt	soil geochemistry, ground geophysics diamond drilling, trenching
31566	2010	Seabrook, M. Hoy, T.	Jackson basin Stenson	trenching
31631	2010	Seabrook, M. Hoy, T.	Payne	ground geophysics, trenching geological mapping
32249	2011	Seabrook, M. Hoy, T.	Cody Creek	geological mapping, prospecting trenching
32432	2011	Seabrook, M. Hoy, T.	Payne	trenching prospecting
33346	2012	Cliff, J.	Ricoridge	prospecting
33920	2012	Goldsmith, L.	Enterprise	sampling rock geochemistry

Table 2: Assessment reports filed with the B.C. Ministry of Energy and Mines, documenting work done by Klondike Silver Corp. and Klondike Gold Corp. in the Slocan camp from 2005 to 2011; complete references are given in the “Reference” section.

### 6.2 Summary

There are no NI 43-101 compliant resource or reserve estimates that have been completed for any of the mines or properties in the Slocan camp, or in immediately adjacent areas including the Jackson basin and Hewitt-Van Roi area.

Surface exploration by Klondike Silver Corp. from 2005-2011 focused mainly in areas of known historical mines or showings. Initial work generally involved prospecting and geological mapping, followed by soil geochemical programs and ground VLF-EM programs. Numerous new, but generally small lead-zinc veins showings were discovered by prospectors, most commonly on strike with previously known mineralization. The soil survey programs outlined large low-grade anomalies, and trenching of several of these, most notably on the Payne property, suggested that these anomalies reflected wide-spread low-grade mineralization or elevated background base metal values in specific argillaceous or calcareous units. The ground geophysical surveys were useful in locating and defining structures, the dominant controls of all vein mineralization throughout the camp.

Trenching was generally unsuccessful, in part because of deep overburden (Hewitt-Van Roi, parts of the Stenson area), non specific targets (as in the Payne area) or difficulty in access (west of Cody Creek). Diamond drilling, beyond the immediate camp area, was limited to the inferred western extension of the Hewitt-Van Roi vein system.

## 7. Geological Setting and Mineralization

### 7-1 Regional Geology

The Slocan Silver camp is within the Kokanee Range of the Slocan Mountains of southeastern British Columbia. The regional geology is shown by Little (1960). The area (Figure 3) is mainly underlain by metasediments of the Late Triassic Slocan Group (Cairnes, 1934; Hedley, 1952), considered to be part of Quesnellia. Hence, it is located west of cratonic North America and pericratonic Kootenay Terrane. A major tectonic boundary, commonly marked by oceanic rocks of Slide Mountain Terrane, is inferred to separate North American and Kootenay Terrane rocks in the east from the dominantly volcanic arc assemblages of the Quesnellia.

The Kokanee Range is bounded to the west by the Valhalla metamorphic complex, exposed on the west side of Slocan Lake (Figure 3). The Valhalla complex was unroofed in Middle Eocene time by normal displacement along the low-angle, east-dipping Slocan Lake fault (Carr *et al.*, 1987). The Slocan Lake fault is an extensional fault of crustal dimension that is imaged to extend eastward beneath the Slocan Silver camp and the Nelson batholith (Figure 3).

The Slocan Group comprises mainly argillite, impure sandstones, argillaceous limestone and minor mafic tuff (Hedley, 1952) that was deposited west of Slide Mountain terrane, possibly as a back-arc basin to island arcs of Quesnellia (Klepacki, 1985). These rocks are highly deformed, tightly folded and sheared. However, metamorphic grade is low and hence many sedimentary structures such as cross-beds and graded beds are well preserved. Argillites are soft to moderately hard, fine-grained and dark in colour. They commonly form bluffs, and are often difficult to distinguish from dark limestone. Limey and silty beds are common throughout the argillite units. Quartzites (see Figure 4) are typically impure, commonly consisting of dark argillaceous, silty to limey sandstone. White or light coloured quartzites are uncommon.



# Slocan Silver Camp

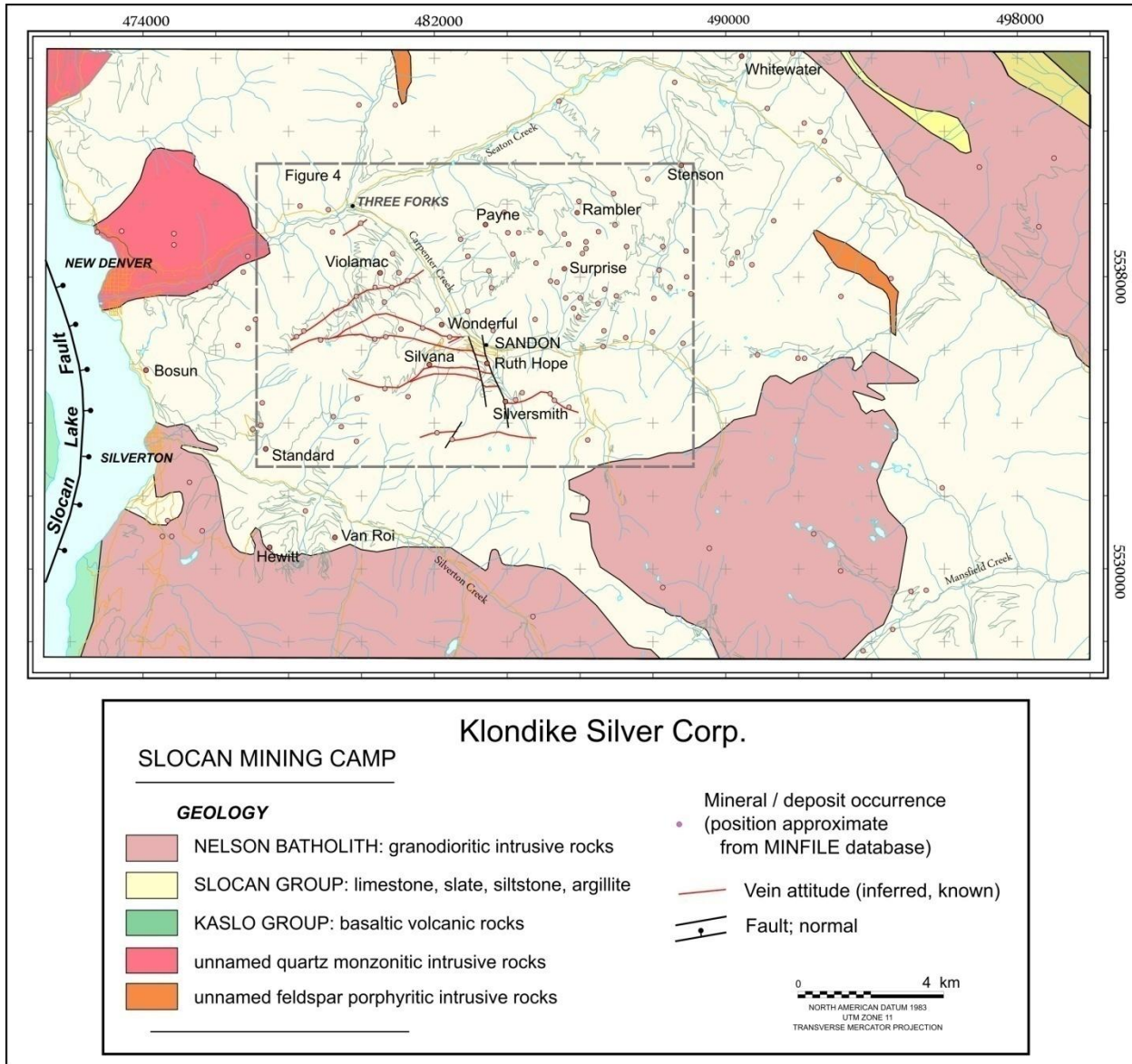


Figure 3: Regional geology of the Slocan Camp, Kokanee Range, Sandon area; modified from Cairnes (1934), Hedley (1952) and Carr *et al.* (1987).

Limestones range from light grey to black, but generally are light grey on weathered surfaces. They are impure, grading from limey argillite to, less commonly, relatively pure limestone.

A variety of intrusive rocks occur throughout the area. The Slocan camp is at the northern edge of the Nelson batholith, a large, composite mainly granodiorite intrusion that underlies much of the area south of the camp and extends southward between Slocan and Kootenay Lakes to south of the town of Nelson. It is a syn to post kinematic intrusion, dated at 165-170 Ma (Carr *et al.*, 1987) that is related to eastward subduction of the oceanic Cache Creek terrane beneath Quesnellia (Monger *et al.*, 1982). Other small intermediate dikes and stocks in the Slocan camp area are probably phases of the Nelson batholith. Lamprophyre and gabbro dikes are common throughout the camp, and in other silver camps within the Kokanee Range.

Many of these have been dated, yielding a model age of approximately 47.5 Ma (Eocene) (Beaudoin *et al.*, 1992a). Vein mineralization in the camp clearly cuts intrusive rocks related to the Nelson batholith and hence must be younger than the batholith. Relationship between mineralization and lamprophyre dikes is more ambiguous; locally, veins appear to cut lamprophyre dikes, but at other locations, veins are truncated by these dikes leading Beaudoin *et al.* (1992b) to conclude that mineralization is Eocene in age.

### 7-2. Camp Geology

The structure of the Slocan Silver camp area is complex. Slocan Group rocks are strongly folded into complex asymmetric and overturned folds (Photo 4); (Hedley, 1952). This folding is associated with a cleavage and locally, by prominent shears. In general, stratigraphy and cleavage within the camp trend northwesterly and dip steeply to the northeast; however, locally both steepen and overturn resulting in southwest dipping successions. Hedley (*op. cit.*) noted that numerous top determinations throughout the camp indicate local reversals in stratigraphic tops due to tight to isoclinal folding. Hedley also noted that the camp, and extensions towards the northeast, are within the most structurally complex part of the district.

Two main fault types are noted in the camp: tangential and crosscutting (Hedley, 1952). Tangential faults approximately parallel stratigraphy, are more difficult to recognize, and are generally not mineralized. Crosscutting faults, as their name implies, cut across stratigraphy, generally trend east to northeasterly and dip to the south. They are the host to virtually all vein mineralization in the camp.

The amount of displacement on the crosscutting faults is variable, from less than a meter to possibly in the order of several hundred meters. Offset of beds and drag folds related to these faults indicate most movement is normal (south-side down) with commonly a considerable component of left-lateral motion. The larger faults, all of which are mineral bearing, are plotted as lodes or veins in Figure 4. They are marked by shearing, shattering and associated alteration zones up to many 10s of meters in width.

### 7-3 Mineralization

Klondike Silver Corp. has acquired most (approximately 70%) of the past major producing mines in the Slocan Silver camp. Historical production data on these, as well as the Van Roi and Hewitt mines, are listed in Table 1. All properties, unless otherwise stated are owned by Klondike Silver Corp.

Figure 5 shows the locations of deposits in the Slocan Silver camp as well as numerous other vein occurrences which are either continuations of the main vein systems or offshoots; these are listed and described in considerable detail in BC Minfile.

Figure 5 also shows the main east-west trend of veins in the Slocan Silver camp. Extrapolation of trends of known lodes indicates that there are at least five main mineralized vein-fault systems south of Carpenter Creek. These are informally referred to as, from north to south, the Hinckley-Idaho, Wonderful-Alamo, Yakima-Sunshine, (Standard-Mammoth)-Silvana-Ruth-Hope (Silversmith-Richmond Eureka), and Canadian-Ivanhoe located south of the Klondike Silver ground. Several parallel zones are known to occur north of these, including the Violamac and Monitor, and other small parallel veins occur between the main lodes.



Photo 4: Folded metasediments of the Triassic Slocan Group, host to many of the veins in the Slocan Silver Camp



Photo 5: Samples of vein, taken from underground from the east extension of Level 4625; left sample shows fine-grained galena with remnant gangue, and right shows brecciated sphalerite-rich vein cut by quartz stringers.

# Slocan Silver Camp

As well as east-trending lodes, prominent northeast-trending systems are recognized between the main lodes. These are developed within extensional faults that developed in response to the left-lateral motion on the main shear zones.

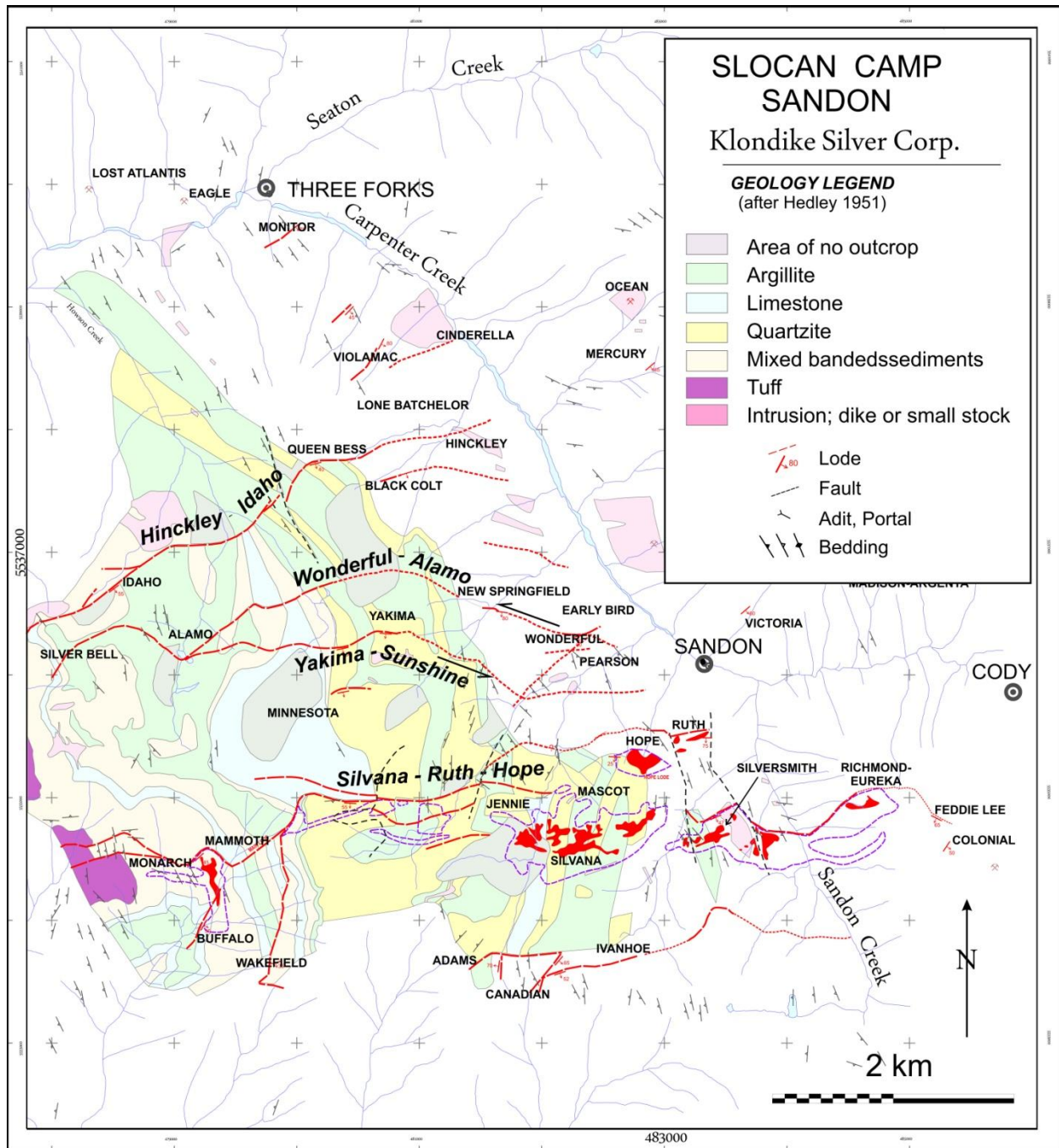


Figure 4: Geological map of the Slocan Silver camp compiled from Cairnes (1934), Hedley (1952) and unpublished maps of Dickenson Mines Ltd., Silvana Mines Ltd. and Klondike Silver Corp.

## Slocan Silver Camp

---

As well as east-trending lodes, prominent northeast-trending vein systems are recognized between the main lodes. These are interpreted to be extensional faults developed in response to the left-lateral motion on the main shear zones, as is schematically illustrated on Figure 5. The intersections of these extensional faults with the main east-trending faults are considered areas of high mineral potential. One of these occurs on the Wonderful property immediately adjacent to the mill at Sandon and was extensively explored on surface and underground by Klondike Gold Corp. prior to acquisition of the camp by Klondike Silver Corp.

### *Hinckley-Idaho*

The Hinckley-Idaho system trends east-northeast through a known and extrapolated strike length of approximately 4 km. The Idaho deposit (with production of 48,812 kg Ag and not part of Klondike Silver holdings) occurs at the western end and the Hinckley (778 kg Ag) at the eastern end. The vein system has not been projected east of Carpenter Creek, mainly due to limited outcrops in the valley bottom, but the Mercury, Sapphire and Wellington veins appear to be on strike and have similar orientations. Alternatively, it is possible that the Payne deposit, located north of the Mercury and Sapphire occurrences, defines the eastern extension of the Hinckley-Idaho system (Fig. 5).

Workings on the Hinckley, developed mainly in the mid 1950s, consist of 5 adits and a shaft. Some work has been done since, including a soil survey grid and some underground development. Unpublished historical Klondike Silver Corp. company reports indicate that the vein is up to a meter thick, and follows a near vertical, northeast-trending fissure which parallels a joint set within host quartzites. It consists of massive, coarse-grained pyrite that contains irregular to wispy bands of coarse-grained sphalerite, fine to coarse-grained, sheared galena and a discontinuous band of siderite in its footwall. Quartz forms irregular lenses and bands within the vein.

### *Wonderful-Alamo*

The Wonderful vein system received considerable work during the period 2004 to 2009 by both Klondike Gold and Klondike Silver. The vein system generally trends east-west, and dips steeply to the south. It trends towards the New Springfield vein to the west, and projects farther west towards the Conductor and Alamo veins, both west of ground held by Klondike Silver Corp. (Figure 5). As with other vein systems southwest of Carpenter Creek, extrapolation and projections to the northeast across creek are not known.

Four main veins have been discovered on the Wonderful property. The most southern, explored in the No. 3 and 4 adits, trends approximately east-west and dips steeply to the south. It is exposed at surface as the “McLanders” vein. The Central vein, explored by the “A” and No. 1 adits, has not been examined or developed during this phase of exploration. Unpublished historical records, held by Klondike Silver Corp. indicate that a sphalerite-galena lode, up to a meter thick, was intersected 30.4 meters from the Pearson portal and was followed to the west for 177 meters.



## Slocan Silver Camp

---

A new discovery in 2004, located by trenching a VLV-EM anomaly, is exposed approximately 200 meters north (and down-slope) from the No. 1 adit. It comprises mainly fine-grained, sheared galena mineralization that consists of angular, broken subcrop up to 0.5 meters in dimension.

A fourth vein, referred to as the New Springfield showing, is exposed on the north edge of the Wonderful property, approximately 800 meters west-northwest from the No 1 portal. It was worked intermittently until 1957 and produced 303,349 grams of silver, 48,792 kilograms of lead and 29,533 kilograms of zinc from 186 tonnes mined (BC MINFILE data). It has been explored with at least four adits and a small shaft. Within the workings, the vein averaged about 40 cm in thickness and was continuous for about 30 metres along strike and 15 metres up dip. The vein is vertically zoned with galena more abundant in the upper levels and sphalerite the dominant sulphide in the lower levels of the mine.

Considerable exploration and development was carried out on the Wonderful vein system by Klondike Gold and Klondike Silver in the period 2004-2009. The objective was to determine the extent of the vein system in order to supply feed to the mill. This work, including surface trenching and underground drilling is described below under “Exploration”.

### ***Yakima-Sunshine***

Yakima is a small east-west trending vein that is on strike with the Corinth adit, 500 meters to the west. It is projected eastward to the more southern edge of the Wonderful property, although occurrences are not known along this eastward projection. Sunshine is a parallel vein, approximately 400 meters to the south, and structurally above the Yakima vein (Figures 5).

On the Yakima claim, three short adits explore a vein striking 110 degrees and dipping 50 degrees south. The vein is within a narrow shear mostly filled with carbonate minerals. Another adit on the east side of the claim explored a third vein locally known as the Granville. Selected hand samples collected from this vein in 1939 assayed 3085 g/tonne Ag and 70 % Pb (Internal prospectus, Silver Ridge Mining Company, 1939).

Considerable underground work has been done on the Sunshine property, with total production of 290,500 grams of silver and 53,470 kg of lead. Host rocks strike north and dip to the east at approximately 50°. On the Sunshine No. 2 claim, a series of adits explore a fissure vein that strikes 114° and dips 55° to 70° southwest. The central part of the fissure vein is partly occupied by a mafic dike. Galena, sphalerite and pyrite with minor tetrahedrite are concentrated on both sides of the dike in a matrix of coarse calcite, siderite and quartz. The surface exposures of the vein are strongly oxidized.

### ***Silvana-Ruth-Hope***

The Silvana vein system, the largest producer in the Slocan camp, is a complex vein system that appears to have been offset by several north-northwest trending faults near its eastern end. It includes several parallel veins that can be traced or extrapolated from the Monarch and Mammoth veins in the west to the Richmond-Eureka in the east, a distance of approximately 7 kilometers. In total, veins along this system have produced more than 18 million ounces of silver and 76 tonnes of lead, mainly from the Silvana, Silversmith and Ruth-Hope mines. The following descriptions of mines along this vein system are summarized from BC Minfile data, unpublished company reports (Silvana and Dickenson Mines Ltd.) and Hedley (1951).

---

## Slocan Silver Camp

---

The Silvana mine is situated on the south side of Carpenter Creek, between White and Tributary Creeks. The Ruth-Hope property adjoins it to the east and the Carnation and Jenny-Evening to the west.

The Main vein strikes east and dips variably to the south. A fine-grained diorite dike has been traced underground, sub-parallel to the main Silvana vein; fragments of this dike often occur in the vein structure. The vein is along a shear, marked by silicification and graphite that postdates regional deformation.

The Main vein has a separate hangingwall and footwall structure for the majority of its strike length. In places these structures can be separated by up to 45 metres. To the west-southwest of the Silvana mine are the Carnation workings (082FNW048), which are part of the Main vein system. The Wakefield (082FNW059) is to the southwest and the Ruth-Hope (082FNW052) is to the east. The Minnie Ha Ha (Lot 3171) is included with the Silvana mine but it is a separate vein structure that occurs 457 metres (true) in the hangingwall of the Main vein structure. The Minnie Ha Ha does not connect with the Carnation workings to the west. The Main vein apparently pinches out to the south and east against Nelson intrusive rocks.

Two types of breccias are found in the Silvana mine. The first type, a "fragmental" or "vein" breccia, contains very angular fragments of country rock with a calcite, siderite and minor quartz matrix. The second type is a "sheared" or "flow" breccia characterized by elongated, mylonitic-style argillaceous quartzite fragments in a graphite matrix with or without calcite and siderite. These latter breccias have shredded and boudinaged the ore minerals. The vein structures are less than 15 metres wide and most are approximately 0.6 to 3 metres wide. Within the lode structure there can be up to 4 mineralized veins present which pinch and swell along strike and down dip.

The main ore mineralization consists of argentiferous galena and sphalerite, with minor amounts of chalcopyrite, tetrahedrite, native silver, pyrargyrite and very minor stephanite, argenopyrite and acanthite. Gangue minerals are calcite, quartz, orthoclase, siderite, tourmaline, chlorite, clay minerals and laumontite. Other minerals that have been identified in the area include smithsonite, anglesite, chrysocolla, malachite, manganese wad, limonite and hematite.

The Ruth-Hope fault, east of the Silvana mine, strikes 160° and dips steeply west. It is a late, post-mineral fault that appears to have right-lateral (dextral) motion of up to 430 meters.

### *Silversmith*

The Silversmith occurrence (Figure 5) represents the continuation of the Slocan King (082FNW196) and Richmond-Eureka (082FNW054) deposits to the east and Ruth-Hope (082FNW052) deposit to the west. On the Silversmith property, the vein has been exploited for a total strike length of 825 metres in six adits connected by raises and shafts. The main access was from the lowest or No. 10 adit.

The deposit consists of a vein within a fissure zone that has a curving strike swinging from due east on the Slocan Star claim to northwest on the eastern part of the Silversmith and Windsor Crown grants and southwest on the western part to the Silversmith and Rabbit Paw Crown grants. The average dip is 45-50 degrees south, steepening to 75° in the lower levels. This irregular trace of the vein is due to the changing trend of the enclosing sedimentary rocks



## Slocan Silver Camp

---

and also, in part, to a large porphyry plug located in the central part of the property. The vein is widest where its attitude conforms to bedding and is most sharply defined and narrow where it cuts bedding at high angles. It also widens at the marked changes in its strike. Although the fault zone is continuous across the entire property, in detail it is defined by a series of en echelon fractures and shears striking northeast and northwest. As elsewhere in the Slocan camp, the northeast fractures appear to be extension fractures and are hence open. They usually carry most of the mineralization while the northwest fractures resemble shears and are rarely mineralized. The fissure varies in width from a few centimeters to 25 metres. It is mostly filled with crushed wall rock and large blocks of feldspar porphyry and massive sulphide that have been incorporated in the fault zone. Large nodules of massive sulphide and fragments of strongly folded ore have been transported a considerable distance from their site of deposition by extensive post-mineralization movement within the shear zone.

Two separate ore bodies were mined, the Silversmith and the Slocan Star. The Slocan Star ore body has been stoped for approximately 365 metres down dip. Galena, sphalerite, tetrahedrite, pyrite, chalcopyrite, quartz and siderite formed discontinuous lenses, some of massive ore but most were mixed with crushed wall rock. The lenses were up to several metres wide aligned diagonally across the fissure. Galena was the most abundant sulphide and was usually associated with quartz.

The Silversmith ore body has been mined for about 150 metres along strike and 180 metres down dip. The deposit was widest above the No. 8 level where two mineralized fissures joined to form a 10 meter wide ore body. Ore minerals were similar to the Slocan Star.

Production from the Silversmith and Slocan Star ore bodies between 1893 and 1965 yielded about 226 tonnes of silver, 32,524 tonnes of lead, 11,751 tonnes of zinc, 17 tonnes of cadmium and 37 kilograms of gold from 355,110 tonnes mined.

### ***Richmond-Eureka***

The Richmond-Eureka is the eastern extension of the Silversmith and Ruth-Hope vein system. Workings comprise a shaft, a series of open-cuts and short adits, and four main adits connected by raises and stopes. The underground work comprises about 1830 metres of drifts and crosscuts and over 300 metres of raises. The workings have explored the main lode over a horizontal distance of about 610 metres and a vertical distance of nearly 305 metres.

On the Richmond and Eureka No. 2 Crown grants, the deposit consists of a vein within an east-trending, south-dipping fault. The fault consists of a strongly brecciated and sheared zone up to 14 metres wide that curves locally to follow bedding, especially near the basic dikes. It appears to widen in soft rocks and tightens in more siliceous strata and dike rocks. The vein consists of up to 2.5 metres of massive sheared galena located at the hangingwall of the fault, and bands and veinlets, up to 5 centimeters thick, of sheared galena at the footwall. A vertical zonation is apparent, with sphalerite becoming more abundant with depth and siderite-calcite gangue passing downwards to siderite-quartz gangue. Pyrite, tetrahedrite and chalcopyrite are present in minor amounts and leaf silver has been noted.

Production from the Richmond-Eureka deposit between 1896 and 1961 yielded about 24 tonnes of silver, 2322 tonnes of lead, 761 tonnes of zinc, 1499 kilograms of cadmium and 590 grams of gold from 36,650 tonnes mined.

### 8. Deposit types

The main exploration targets in the Slocan camp are the silver-lead-zinc veins. According to BC Minfile, these are classified as “polymetallic Pb-Zn-Ag ± Au” deposits. This deposit class, with particular reference to British Columbia examples, is described by Lefebure and Church (1996) and the following is largely summarized from that report.

Polymetallic Pb-Zn-Ag veins are typically sulphide rich and contain sphalerite, galena, silver and sulphosalt minerals (tetrahedrite, tennantite) in a carbonate, quartz and pyrite gangue. Other common sulphides include chalcopyrite, arsenopyrite and stibnite. Gangue includes siderite, calcite and/or dolomite, as well as locally barite and hematite. Wall rock alteration is typically limited to a few meters, and includes sericite, silica and disseminated pyrite with thin veins of siderite or ankerite.

Veins hosted by metasediments, such as those in the Slocan Silver camp, are typically emplaced along faults in sedimentary basins that are dominated by clastic rocks. Intrusive igneous rocks are common, although the veins generally postdate these intrusions, the regional metamorphism and associated deformation.

Veins are moderately to steeply dipping. They often occur as sets of parallel veins and associated offset veins that range in thickness from a few centimeters to approximately 3 meters. They generally have considerable strike length and depth continuity, from hundreds of meters to more than a kilometer. Veins may widen to 10s of meters in stockwork zones.

Regional ore controls are faults, commonly second-order faults related to larger, possible crustal-scale structures. Veins appear to preferentially develop in more competent lithologies in argillite-clastic successions, such as the quartzites or limestones where a degree of brecciation can occur that can host mineralization. Many veins appear adjacent to large intrusive bodies, and commonly veins have marginal porphyry-style mineralization. Dykes are commonly emplaced along mineralized structures. Late cross-cutting faults commonly offset the mineralized vein structures.

A variety of genetic models have been proposed for polymetallic silver-lead-zinc veins. Historically, these veins have been considered to be magmatic hydrothermal, resulting from the differentiation of magmas with the development of a volatile fluid phase that escaped along faults (Reynolds and Sinclair, 1971). The close spatial association of veins with intrusive bodies, such as the Nelson batholith, is the main supporting evidence for this model. Recent studies on veins in the Slocan, Ainsworth and Bluebell camps have suggested that mineralization is Eocene in age, related to crustal structures such as the Slocan Lake fault (Beaudoin *et al.*, 1992a). In this model, metals and sulphur are carried in high-level meteoric fluids that precipitated as veins on mixing with ascending hydrothermal fluids that were generated along the Slocan fault. This model relates vein formation with Eocene crustal extension and development of core complexes to the west.

### 9. Exploration

Exploration and development of properties that constitute the Slocan Silver camp date back to their initial discovery in 1895. Exploration in the camp, and underground for Dickenson Mines and Treminco Resources, was under the supervision of mine managers Stephen Phillips until 1986 and David Makepeace (P.Eng.) from 1986 to 1989. Recent exploration by Klondike Gold Corp. began in late 2005 and continued through 2014 by Klondike Silver Corp. This summary of recent exploration is taken mainly from BC Ministry of Mines assessment reports, generally filed annually by contractors to Klondike Silver Corp. It describes briefly regional exploration programs as well as exploration in the main part of the Slocan Silver camp south of Carpenter Creek. Regional exploration was generally done by independent contractors under the supervision of Trygve Hoy until 2010, and since then by Locke Goldsmith, a Professional Engineer (Geology) in British Columbia. Exploration in the main part of the camp, and underground, was done by staff of Klondike Silver Corp. including Len Palmer and Stephen Phillips.

#### 8-1 Regional Exploration

Regional exploration concentrated mainly on discovering surface exposures of lead-zinc vein mineralization that could be mined in order to supply feed for the Klondike Silver plant at Sandon. This exploration was concentrated in several areas, notably the Jackson and Stenson basin area approximately 6km northeast of Sandon, the Payne mine area 3 km to the north, the Cody Creek area inferred to be the eastern extension of the main veins in the Slocan camp, and the Hewitt-Van Roi area south of Silverton Creek, 6 km southwest of Sandon (Figure 3).

##### *Jackson basin-Stenson*

Work on the Stenson property was mainly concentrated on attempting to locate mineralization between the Bonton showing (BC Minfile 082KSW020) located on the east facing slopes of Stenson Creek and the New Jackson showing (082KSW020) located approximately 1200 meters to the east. Minor production (12 tonnes) from the Bonton showing from 1893 to 1917 produced a silver-rich ore, grading 7300 g/tonne silver (BC Minfile). Exploration on the Stenson included several small soil geochemical surveys that covered a total area of 500 by 550 meters, and indicated broad areas of anomalous lead, zinc and silver but no clearly defined trends that paralleled the trend of the Bonton showing or the easterly trends of the main veins in the Slocan Camp (Assessment report 28485). A ground magnetic/VLF survey in 2007, covering an area of approximately 600 by 600 m, showed both north and southeast trends, but their significance was not understood (Assessment report 30081). However, several short exploration adits were discovered along the strike of the southeast-trending EM anomaly, but no historical record of this work is known. A short trench on the eastern side of the claim, along the inferred eastern projection of the Bonton trend failed to reach bedrock (Assessment report 31566).

The former Jackson mine (BC Minfile 082KSW015) is the largest producer in the Jackson basin, with 5,846 tonnes mined intermittently from 1894 to 1975. Exploration by Klondike Silver in the Jackson basin included soil geochemical surveys, ground VLF-EM surveys, prospecting, mapping and trenching. A soil survey, covering an area of 800 by 1400 meters that was conducted in the immediate vicinity of the Jackson deposit in 2007, outlined several anomalous zinc-lead-silver trends that were on strike with and overlay the known

## Slocan Silver Camp

---

mineralized Jackson vein trend as well as the trend of the Corrigan veins approximately 200 meters to the north (Assessment report 30323). The soil grid was extended several hundred meters to the east in 2008, in an attempt to trace the trend of the Jackson lode, but low values here suggested that structures may be truncated at Stenson Creek (Assessment report 31034). Prospecting and mapping in 2008 also discovered several mineralized zones west of the Jackson mine. Galena and sphalerite were visible in many samples, but analyses were of selected hand samples that do not necessarily reflect the overall tenor or grades of these veins. Other than some geological mapping and a ground geophysical survey in 2009 (Assessment report 31566), no further work has been done in the Jackson basin area.

### *Payne mine area*

Exploration of the Payne property area was centered along the trend of the Payne mine, a major producer in the Slocan district with approximately 110,600 tonnes mined until its closure in 1939 (BC Minfile 082KSW006; Table 2). Exploration by Klondike Silver Corp. began in 2008 with a soil geochemical survey that covered an area of 360 hectares. Contour plots of lead, zinc and silver indicated two broad north-east trending coincident lead-silver anomalies; the more southern is parallel to and on trend with the Payne lode structure while the second anomaly appears to be a parallel zone 1200 meters to the north (Assessment report 31028).

The soil geochemical anomalies were located on the steep southwest facing slopes of Payne Mountain and trenching conducted in 2009 was somewhat hampered by the steep terrane. Four trenches located in the southern anomaly failed to intersect significant mineralization, although a fault zone with considerable siderite alteration in the most western trench may reflect the western extension of the Payne structure. Two short trenches excavated in 2010 located on a separate soil geochemical anomaly approximately 1 km southeast of the Payne trend also failed to expose lead or zinc sulphide mineralization. No further exploration work has been done by Klondike Silver Corp. in the Payne area.

The lack of success in trenching these lead-silver anomalies may be due to several factors. The steep terrane had considerable control in locating trenches, and in extending trenches to cover the complete length of the anomalies. This steep terrane may also have caused some down-slope migration of anomalous values, which was not taken into account in these initial programs. Finally, much of the exposed rock in the trenches was incompetent siltstone units that were locally extensively fractured; these units are typically not favourable hosts for mineralization in the Slocan camp where most mineralization is concentrated in more competent quartzite or limestone. Further evaluation of these soil anomalies should concentrate more in areas that are known to intersect more competent lithologies, as defined by detailed geological mapping, and on spot geochemical highs that may reflect underlying mineralized vein as opposed to contoured anomalies that may reflect high background values in lithologies.

### *Cody Creek area*

Veins in the Cody Creek area are located immediately east of the Main veins in the Slocan camp, although they are inferred to be offset to the south by a north-trending fault immediately south of Sandon. Exploration in the area was concentrated on the west and east slopes of Cody Creek with the intent on discovering the inferred eastern extensions of known mineralization in the camp, specifically the Main Lode (which includes the Silvana, Standard and Ruth-Hope mines) and the Adams Lode (Ivanhoe and Canadian Mines). The Richmond-

Eureka, a major historical producer in the camp (Table 1), lies in the western part of the Cody Creek area, and several smaller lead-zinc vein showings are exposed in the heavily wooded slope on the west side of the creek.

Exploration included soil geochemical surveys on the west and east side of Cody Creek, and geological mapping, prospecting and trenching. Mapping “re-discovered” lead-zinc-silver vein mineralization in several areas, including an adit at the Chicago No. 2 mine and at the Jazmine showing. Trenching, limited by difficult access to the west side of the creek, consisted of a single trench that was located mainly in the area of a small silver soil anomaly (Assessment report 30335) that failed to intersect significant mineralization. Further work was recommended (Assessment report 32249) including improving access to the west side of the creek in order to better evaluate the several exposures of vein mineralization there and to assess their continuity with the main veins to the west.

### *Hewitt-Van Roi*

The Hewitt-Van Roi area, located approximately 6 km south of Sardon (Figure 3) underwent exploration by Klondike Silver Corp. from 2009 to 2010 that included geological mapping, a ground geophysical survey, soil geochemistry, trenching and diamond drilling. The main focus of this work was to explore for the inferred western extension of the main systems of the Van Roi and Hewitt mines, in an area largely covered by overburden and heavy vegetation, and on strike with and between the mines to the east and the similar trending vein occurrences to the west, including the Galena Farm and Noonday. This work is described in Assessment report 31518, and in a NI43-101F Compliant Technical report filed by Klondike Silver Corp. in 2010. As the property is not contiguous with Klondike Silver claims that comprise the Slocan Silver camp, it is not dealt with further in this report.

## **8-2 Camp exploration**

### *Wonderful*

Considerable exploration, including trenching, drilling and underground development, was conducted on the Wonderful property by Klondike Gold Corp. and subsequently Klondike Silver Corp. from 2004 through 2009. The Wonderful property was one of the first discoveries in the Slocan camp. Galena float led to ground sluicing in 1894 and the discovery of a boulder train of almost massive galena that subsequently led to the discovery of the Wonderful vein system. Two levels were opened, the “A” level at 1282 meters elevation and the No. 1 at 1252 meters (Figure 6). In 1948-49, the Pearson adit, approximately 60 meters below A level, was located by stripping on the projection of the drift on the No. 1 level. A sphalerite-galena lode, up to a meter thick, was intersected 30 meters from the portal and was followed to the west for 177 meters. An exploratory tunnel, the Lookout adit, was started in 1948, and drifted southwest for 686 meters (Figure 6). Two exploratory branches were driven north from the Lookout tunnel, the more easterly in 1983.

A mineralized lode discovered in No. 2 adit (Figure 6) was explored in 1952 by a new, No. 3 adit and a raise driven to connect the two levels. In the same year No. 4 adit was started and continued in 1953. At 305 metres from the portal a lode was intersected in the approximate projected position of the lode intersected in No. 3 adit. Only minor work was done on the property from 1953 to 1958.

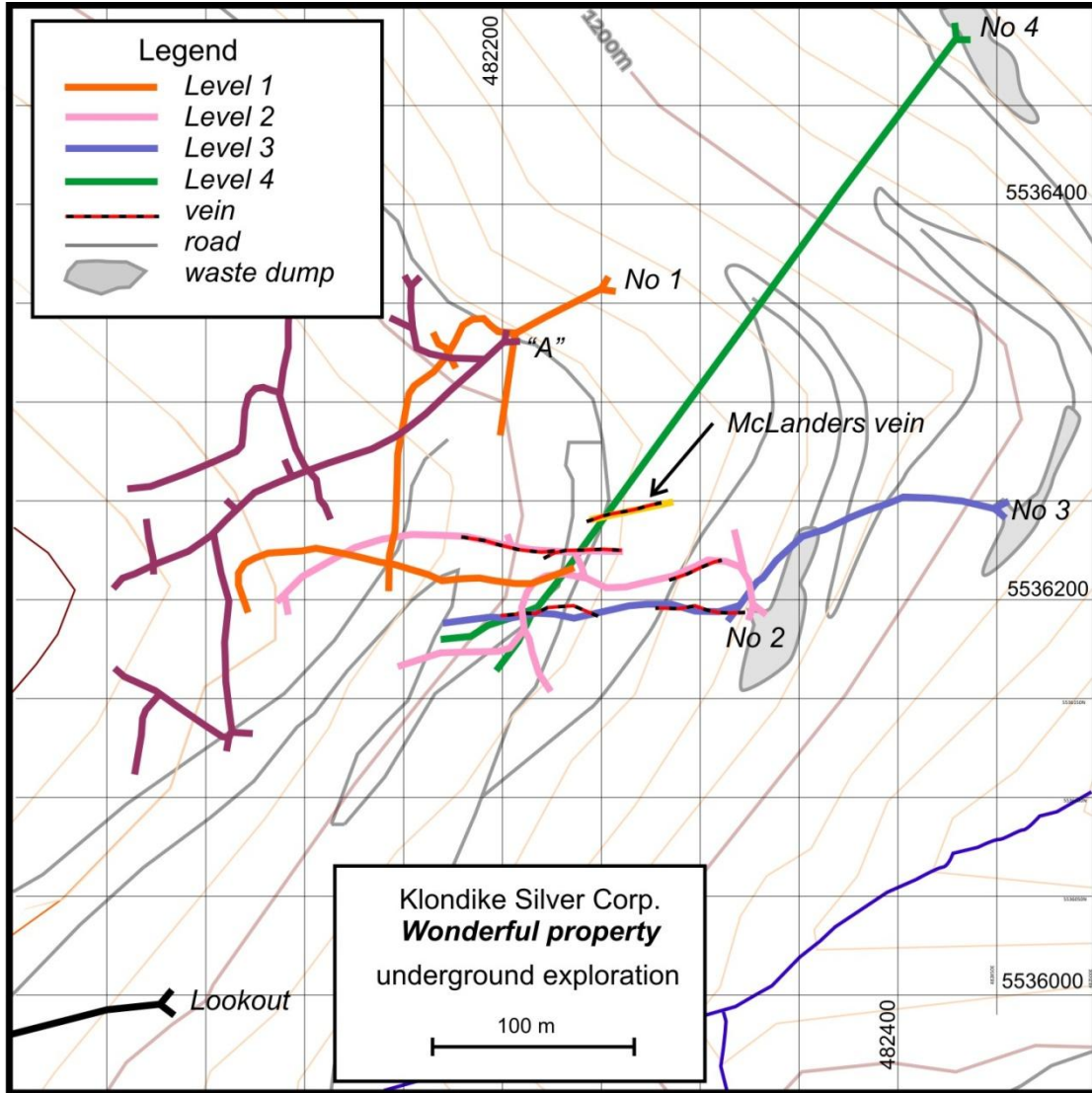


Figure 6: Schematic plan map of the Wonderful property, showing underground development, location of "McLanders vein" and location of veins underground; modified from Hoy (2005) and Seabrook (2010).

Klondike Gold Corp. acquired the property in 1980. A grid was established and VLF-EM and soil geochemical surveys were done. As this property was held by Klondike Gold Corp. during mining of the Silvana and Ruth-Hope deposits by Dickenson Mines Ltd in the 1980s and early 1990s, little follow-up exploration work was done.

The most southern vein on the property is exposed at surface as the "McLanders" vein where trenching in 2004 exposed a continuous galena-rich vein up to 25 cm wide and approximately 20 meters in length. Galena from the trench was fine grained and sheared, characteristics generally associated with increasing silver grade in the Sandon ores. Four chip samples across the vein, 20 to 40 cm in length, returned values of 3.65 to 45.22% Pb,

## Slocan Silver Camp

---

1.47 to 3.74% Zn and 5.3 to 59.7 oz/ton Ag (Hoy, 2005). Three shallow holes were drilled on the this vein system in June, 2005; two of these tested the down-dip extension of the vein and a third, 20 meters to the north, tested the inferred extension of the vein to the west. These holes confirmed the continuity of the structure, although the intersections were sphalerite-rich rather than galena-rich. Results are tabulated below in “Drilling”

The central vein, explored by the “A” and No. 1 adits, has not been evaluated further by Klondike Silver Corp.

The most recent vein discovery was exposed in 2004 by a VLF-EM anomaly located approximately 200 meters north (and down-slope) from the No. 1 adit . The vein comprised mainly fine-grained, sheared galena mineralization that consisted of angular, broken subcrop up to 0.5 meters in dimension. Assays of 15 selected samples of this exposure returned values of 0.84 to 50.29% Pb, 7.27 to 24.91% Zn and 2 to 1243 g/tonne Ag (Hoy, 2005). Immediately down slope, a number of boulders of massive galena, several 10s of centimeters in diameter, were discovered. However, due to heavy overburden, it was not possible to trace mineralization further by trenching. Two holes (DDH 8 and 9) from the same setup attempted to trace the down-dip extension of the vein. They intersected wedges of silicified argillaceous metasediments in hornblende porphyry intrusive that contained abundant calcite veining and traces of pyrite, pyrrhotite and chalcopyrite.

In 2008, sampling underground of the Wonderful vein was undertaken along a raise between Level-4 (at 1144m elevation) and Level-3 (1192m elevation) (News Release, dated December 8, 2008). The raise followed a vein on the Wonderful system across all lithologies for a length of 54.4m at 49°. Twelve chip samples were taken, and data on these is given in Table 3.

Width (cm)	sample	Zn %	Pb %	Ag g/tonne
25	54.5m	7.34	1.50	38
65	50 m	3.76	1.85	62
45	44 m	2.47	0.08	13
50	40 m	3.04	0.13	10
55	35 m	3.05	3.39	163
30	30 m	21.60	0.25	109
20	25 m	32.98	0.08	55
47	22.5 m	29.86	7.09	228
12	20 m	44.34	0.60	87
37	14 m	36.76	0.24	89
39	9 m	728.17	2.49	154
42	3 m	39.09	2.36	139

Table 3: Raise assay results, Wonderful vein, between Levels 3 and 4; widths represent true widths, sample stations are given measuring from the top downwards. The vein varies in width from 12 to 45 cm, averaging 40-45 cm. (taken from Klondike Silver news release, December 8, 2008).

## 10. Drilling

Ten holes were drilled (NQ core) on the Wonderful property in 2005, for a total of 674.5 meters. Data on the holes are summarized in Table 4.

DDH 05-1 and 2 were tests of coincident geophysical and geochemical anomalies just above the A portal and 160 meters northwest of the A portal, respectively. Both were collared on an access road, and both intersected barren, broken argillites that were stopped in fault breccias. No samples were submitted for analyses.

DDH 05-3, 4 and 5 were tests of mineralization trended near the portal of the McLanders vein. They intersected the down dip extension of the McLanders fault zone (05-3 and 4) and the strike extension to the northwest (05-5). Mineralization within this zone was sporadic, but generally zinc rich in contrast to more galena-rich exposures at surface. DDH 05-3 contained several thin fractured quartz veins over a core interval of approximately 40 meters (estimated true width of 25 meters, based on projection to surface and core/vein angles) that contained variable amounts of sphalerite and pyrite. The highest values, from 28.8 to 31.1 meters (approx. 1.5 m true width), assayed 5.1 ppm Ag, 0.2 % Pb and 0.99 % Zn (Hoy, 2005). DDH 05-4 intersected a mineralized sphalerite-pyrite zone from 20.2 to 31.7 meters, with a 0.8 meter interval (approx. 0.5 m true width) containing 51.7 ppm Ag and 25.33 % Zn. DDH 05-5, a vertical hole approximately 20 meters northwest of holes 05-4 and 05-3, failed to intersect the McLanders vein.

Drill holes 05-6 and 05-7 were angle holes that tested a VLF-EM anomaly below Trench 04-3, approximately 150 meters southwest of drill hole 05-3. Neither intersected vein nor significant fault zones.

Number	UTM East	UTM North	Azimuth	Dip	Total depth
05-1	482319E	5536209N	325	-55	72.2 m
05-2	482220E	5536309N	270	-55	66.8 m
05-3	482330E	5536198N	035	-55	62.5 m
05-4	482330E	5536198N	005	-55	57.0 m
05-5	482317E	5536209N		-90	46.0 m
05-6	482197E	5536088N		-90	44.5 m
05-7	482260E	5536141N	300	-60	68.9 m
05-8	482443E	5536520N	285	-55	96.3 m
05-9	482443E	5536520N	300	-55	72.5 m
05-10	482401E	5536302N	300	-55	87.8 m

Table 4: Summary of 2005 drill holes, Wonderful property, Slocan camp.



## Slocan Silver Camp

---

Drill holes 05-8 and 05-9 were attempts to intersect the new discovery vein that was located along a coincident geochemical/geophysical anomaly at Trench 04-1. The setup of both holes, on an exploration access road, was hampered due to deep, sloughed overburden and hence both holes were drilled at a shallow angle to the inferred strike of the vein and failed to adequately test its down-dip extension. They did, however, intersect siliceous, fractured zones, with thin quartz-carbonate veins that contained trace to minor sulphides (pyrite, pyrrhotite, chalcopyrite) along the margins of a hornblende porphyry intrusion.

Drill hole 05-10 was an attempt to intersect the inferred on strike extension of the main Wonderful vein system northeast of portal A. Near the bottom of the hole, a section of broken, fractured silicified argillite that may represent a fault zone structurally beneath the Wonderful vein was intersected.

The results of more recent work on the Wonderful property are detailed in Assessment report 31440 (Seabrook, 2010) and summarized in a Klondike Silver Corp news release, dated August 07, 2009.

*“Underground exploration and development, including a raise and two diamond drill stations, has been undertaken in the lowermost workings, Levels 3 and 4.*

*Two drill stations were developed in the lowest underground workings, Level 4 at 1140m elevation, 100 meters apart, creating setups for two drill arrays. Ten diamond drill holes were completed, targeting mineralization at and above this elevation, for a total of 637m drilled.*

*These holes tested the extent of mineralization between Level 4 and Level 3, the latter at 1192m elevation. Klondike Silver had mined a new raise by the fall of 2008, from Level 4 up to Level 3, following continuous, if narrow, mineralization along a single, near vertical, E-W striking vein. Widths and grades improved where there were structural distortions and a splaying or stepping vein.*

*Drilling results demonstrate that the Wonderful vein, in the lower levels, is a nearly straight, vertical E-W planar structure with a typical width of 35cm, and is primary a sphalerite (zinc) – carbonate vein; minor amounts of lead and silver are present. Recent underground mapping, of Levels 3 and 4, show the vein to vary between 20 and 65cm width.*

*One drill hole, DD09-06, intercepted an interpreted zone of structural distortion where the vein is divided into at least 3 closely-spaced veins, combining for a true width of 2.47m (8.12ft) with average grade of 12 g/T silver, 0.16% lead and 11.16% zinc.*

*Holes drilled around DD09-06 found a single vein at the typical 35cm width, but were not able to follow the splaying structure.*

*A final hole, DD09-10 was drilled steeply upward to test the vein continuity above the Level 3 working. It had been formerly interpreted that the zinc vein, shown in the lower workings, was structural connected to a lead-silver vein, known as McLanders vein, found on surface..... at 1265m elevation. DD09-10 intercepted a major fault, near 1230m elevation – Level 2 and it is possible that this fault separates the zinc resource delineated in the lower workings from McLanders vein.”*

In summary, both surface and underground drill results confirmed the vertical extent of the McLanders vein on the Wonderful property, but total sulphide and lead and silver grades were generally less than those exposed at surface. This supports conclusions that mineralization

in these polymetallic lead-zinc-silver veins are highly variable within the through-going, controlling fault structures.

### **Summary**

Trenching of previously acquired VLF-EM and soil geochemical data resulted in discovery of vein lead-zinc-silver mineralization in two new locations on the Wonderful property, and coincided with known mineralization of the McLanders vein. Hence, it is believed that this is a useful exploration method in an area such as the Slocan camp where there is considerable overburden, and exposures are largely restricted to mine and exploration access roads. The anomalies have two prominent trends, an east-west trend that parallels the regional trend of the main veins in the Slocan camp, and a northeast-trend. Based on veins elsewhere in the camp, it is interpreted that these trends coincide with the regional east-west shear veins and with a set of extensional veins that are developed due to left-lateral (sinistral) motion along the main veins.

### **11. Sample preparation, analyses, and security**

Drill core from surface drilling on the Wonderful vein system was logged by D. Wehrle (P.Eng.) and underground drill core by D. Good (B.Sc.) and M. Seabrook (B.Sc.), geologists under the supervision of the author, Trygve Hoy. These geologists marked intervals for splitting. Core sample intervals typically ranged from 0.5 m to 1.0 m and were defined by rock lithologies; i.e., quartz-sulphide vein versus fault shear zone. Analyzed samples fairly reflect mineralization observed in drill core. Core samples were split by an independent contractor employed by Klondike Silver Corp. and under the supervision of the geologists. Split core samples were placed in plastic bags, sealed and shipped by bus to Acme Laboratories in Vancouver, B.C. for 33 element analyses by ICP. The author believes that the sampling, shipment and analytical procedures employed by Klondike Silver Corp. and Acme Laboratories are adequate. In all cases, anomalous results in drill samples were verified by visual examination of core by the field geologists or supervisor (Trygve Höy).

### **12. Data verification**

Acme Laboratories is a well-recognized, certified laboratory operating in Canada. Klondike Silver Corp. did not submit standards nor duplicate samples with batches; however, Acme Analytical Laboratories did include their recognized standards and blind duplicates in all batches and these agreed with all assays of drill core. Furthermore, the limited number of assays of drill core that were submitted on the Wonderful property returned values that were typical of production figures and of many thousands of analyses that have been done on the main veins of the Slocan camp, dating back to initial production in the early 20th century.

In summary, all core logging was done by a graduate geologists. The field manager (Trygve Höy) visited the drill sites and supervised and inspected the drill core and sample intervals prior to submittal to the lab, and visually noted the presence of mineralization in samples that returned high base and precious metal values.

### **13. Mineral processing and metallurgical testing**

During past production, as recently as 2013, a process of sampling of mill feed and assaying was in place at the mill site. Essentially it involved taking a belt sample and a series of 5 head samples during each shift run. The belt samples were pulverized in the company assay lab and the belt samples and the blended head samples were analyzed in the lab. Blended lead concentrate and a blended zinc concentrate samples were also taken and analyzed prior to shipping to the Teck Resources smelter. Tailings samples were routinely taken and analyzed as well in the Klondike Silver laboratory. These samples provided the company with a record of mill feed, concentrates and tailings, and assurance that smelter returns were comparable with shipped concentrates, and that tailings effluent complied with permit regulations.

To the author's knowledge, results of head sample analyses compared favourably with results from the coarse belt samples and from those obtained from smelter returns. Past production and smelting of vein material has not identified any deleterious elements that effect the production of metals from the mine.

### **14. Mineral resource estimates**

There are no NI 43-101 compliant mineral resource estimates completed on any mineralized deposits in Klondike Silver's property.

### **15. Mineral reserve estimates**

There are no NI 43-101 compliant mineral reserve estimates completed on any mineralized deposits in Klondike Silver's property.

### **16. Mining Methods**

Properties that constitute Klondike Silver's claims in the Slocan Silver camp include numerous past producing mines, as listed in Table 1. These have historical underground production that dates back to discovery of the veins in the camp in the late 1890s. The mines have been worked by a number of companies, most recently by Klondike Silver Corp. intermittently from 2005 to 2013.

The Silvana underground mine was mined using a modified room and pillar method due to the mineralized vein dipping at approximately 30°

All proposed underground exploration and development at any of the mines will utilize extensions of past-producing levels, initially the 4625 level and possibly the Carnation 5280 level.

Underground exploration is planning to focus on evaluating zones that were identified by previous operators, most notably Treminco Resources Ltd. as outlined in an unpublished 1993 report that was authored by the mine manager at the time, Stephen Phillips. The zones comprise mineralized veins that were intersected in underground drilling, but not sufficiently drilled nor evaluated to constitute resources or reserves. Initial exploration will focus near the eastern extension of 4625 level, generally at lower elevations.

Underground work will focus on completing the rehab of the 4000 level drift from the east in order to allow access to any mineralized zone below the 4625 level, and to provide a haulage to the 4000 level portal. Work will also include establishing underground drilling stations on the 4625 level to explore mineralized zones below this level.

The “Silvana portion of the “Main Lode” was faulted off in the western portion of the mine. Several attempts have been made over the years to identify the fault off-set from the old Silvana workings. Geological 3D modeling of the western portion of the Silvana working and the Carnation workings could provide the necessary underground drill targets necessary to find the fault off-set. Underground exploration development and drilling from the western edge of the Silvana workings and the Carnation 5480 level could be utilized.

Production rates and life of the operation depend entirely on locating underground ore reserves. The mill is rated at 100 tonnes per day. All mining equipment is on site, and has been used as recently as 2013.

### **17. Recovery Methods**

A flotation mill with a capacity of 100 tonnes per day with a permitted tailings pond system is in place and has been used successfully for decades in processing ore and producing two concentrates, a dominantly lead-silver and a dominantly zinc concentrate.

Energy can be purchased from BC Hydro for the mill site. Klondike Silver has 6 permits for water use. The primary source of water for the mill is Tributary Creek, located approximately 50 meters from the mill site. The creek has sufficient flow to provide an adequate water supply year-round.

### **18. Project Infrastructure**

All infrastructure for the mill site, including the coarse ore bins, crushers, flotation mill, drying facilities, assay lab, Tailings management facility, exploration and general office, first aid station, mine rescue offices and "dry", and heavy duty equipment storage site are in place (Photos 6, 7) and have been used recently (2013, mill production) or are in use at present, including portals that access 4000 and 4625 levels mine levels. Some infrastructure requires updating, restoration and minor brushing out.

An amended Permit1203 (June 3, 2015), issued under the provisions of the Environmental Management Act to Klondike Silver Corp., allows discharge of effluent to their tailing management facility located parallel to and in the Carpenter Creek valley, immediately northwest of the mill site. Three tailings ponds are in place, and have been used during previous operations, and a planned fourth is allowed under the restrictions of the permit. Details of the amended Permit are shown in Appendix 4. Essentially, the Permit limits discharge to 410 cubic metres per day, controls the amount of solids, cyanide, and dissolved metals, and restricts the location of the discharge.

Klondike Silver Corp. has retained the services of Golder Associates to recommend and advise on geotechnical and hydrotechnical work on the tailings ponds and armouring of Carpenter Creek that is required in response to the orders of the Ministry of Energy and Mines "Report of Geotechnical Inspector" dated July 23, 2013, the Notification of Chief Inspector's Orders dated August 18, 2014 and a memorandum from the Chief Inspector of Mines dated February 3, 2015. This work is required prior to the mine operations resuming, as noted in the three Minister of Mines documents. Klondike Silver Corp. has responded to these memorandum and has begun (June, 2016; Photos 9, 10) upgrading work on the tailings ponds, with a priority to emplacing riprap armouring on the southwest bank of Carpenter Creek and removing trees and brush from the slopes of the three upper ponds.

## Slocan Silver Camp

---



Photo 6: View of the Klondike Silver mill site at Sandon; the coarse ore chute is shown in the center background, the assay lab in the top right; the office facilities are located to immediate left of photo.dsa



Photo 7: View looking up the Carpenter Creek valley with the coarse ore bin shown in the foreground.

## Slocan Silver Camp

---



Photo 8: Exploration and mine equipment; backhoes stored at mill site.

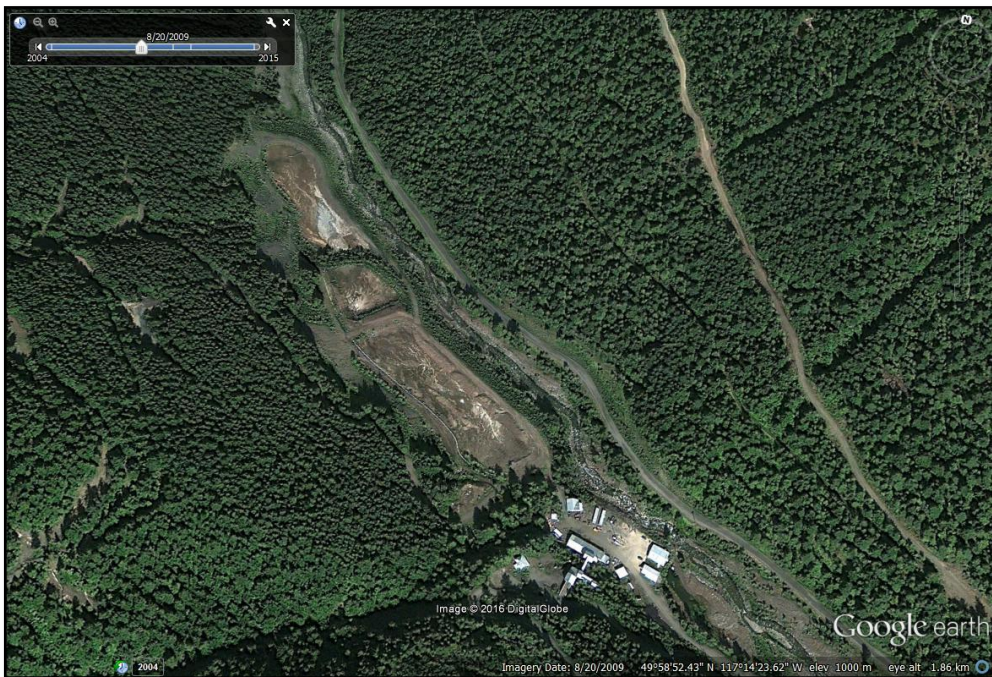


Photo 9: Aerial view of Klondike Silver mill site and three upper tailings ponds, August 8, 2009; view to then north..



Photo 10. No. 1 pond, June, 2016; remedial work in progress includes brush clearing along the pond edges, raising the berms and dams, and adding riprap along banks of Carpenter Creek on the west side of the ponds.

### **19. Market Studies and Contracts**

The author is not aware of any relevant market studies that have been undertaken by Klondike Silver Corp. However, Klondike Silver Corp. has a contract with the Teck Resources smelter in Trail, British Columbia to process all lead, silver and zinc concentrates produced at the mill site, and during past production received payment for recovered metals.

### **20. Environmental Studies, Permitting and Social or Community Impact**

Past and ongoing work on the property has complied with all permitting required by the B.C. Ministry of Energy and Mines and the Ministry of the Environment.

The author is not aware of any environmental issues that could materially affect the ability to operate the mill or the underground exploration.

The Company has an amended permit, as noted above, that allows discharge of effluent to tailings impoundments located on Company property. The tailings management facility has been used for past production at the mill site. The Company is in the process of completing Ministry of Mines requirements to evaluate the geotechnical stability of the ponds.

The Company has 6 valid water licenses for water use for the operation of a mill, drilling, and domestic use. The permits have restrictions on the amount of water that can be used from each site. Tributary Creek, the main water supply for the mill site, allows sufficient year round water supply to operate a 100 tonne per day mill.

The property and mine site are located at the historical mining town of Sandon, a small town with a permanent population of only a few residents. Sandon is located on an all-weather road approximately 15 kilometers from New Denver, and approximately 100 km by paved highway from the towns of Nelson and Castlegar. Sandon was founded on mining in the area and historically has relied heavily on these operations in the Slocan Silver camp. A small work force, with past experience in mining and milling at the Sandon mill site, is currently available in the New Denver area.

Klondike Silver has reclamation bonds (in the name of Slocan Minerals) in place for the Silvana operations in the total amount of \$100,000 (M-65).

### **21. Capital and Operating Costs**

To the author's knowledge, this category is not relevant to the report as there are no reported NI 43-101 compliant mineral reserves on the Property.

### **22. Economic Analyses**

To the author's knowledge, this category is not relevant to the report as there are no reported NI 43-101 compliant mineral reserves on the Property.

### **23. Adjacent Properties**

The author is not familiar with the geology and historical production data of adjacent properties. Numerous past producers, dominantly base and precious metal veins, are known throughout the district and have an extended history of exploration and mining that dates back to the latter part of the 1890s. Only a few are described in this report, and all data and information on these is summarized from BC Minfile reports and selected BC Ministry of Energy and Mines assessment reports filed by mineral exploration companies. A few significant properties are described, those with a recent or extensive exploration history or past production; none of the adjacent properties are currently being mined.

#### **Willa (BC Minfile 082FNW071)**

The Willa property is located on the east side of Slocan Lake, approximately 7.5 km south of Silverton. It is a "sub-volcanic breccia-hosted-type deposit" that "represents a transition from porphyry copper to epithermal conditions" (Ash et al., 2015). Two styles of mineralization occur on the property: molybdenite mainly associated with quartz veinlets in a quartz latite porphyry and, more significantly, gold-copper-silver associated with calcsilicate alteration. Three main zones of gold-copper-silver mineralization have been identified. The central Main zone contains the bulk of the mineralization and is comprised of two near vertical, en-echelon tabular bodies that strike north-south across the core of a breccia pipe. The West and East zones occur in marginal crackle breccia and may form one continuous arcuate zone around the southern portion of the breccia pipe (Heather, 1985). The Main zone extends to approximately 270 meters below its exposure at surface, with a width of 10 to 60 meters and a length of 400 meters.

The deposit was discovered in 1898 and has had a history of exploration and development that has continued to at least 2005 (BC Minfile data). It has had limited underground production, mainly in the form of bulk tests, with most recently (1988) recovery of 7883 g Ag, 2873 g Au, 4414 kg Cu and 4154 kg Zn from 495 tonnes of custom milled ore.



## Slocan Silver Camp

---

Recently (November 30, 2015), measured and indicated NI 43-101 compliant resources have been published by Discovery Ventures Inc. (Ash, Gilmour and Waldegger, 2015).

### **Enterprise (BC Minfile 082FNW148)**

The Enterprise mine is located on the east side of Slocan Lake approximately 11 kilometres northeast of Slocan City and 17 kilometers south of New Denver. The deposit is a polymetallic vein deposit, discovered in 1894 and mined intermittently until 1977. Total recorded production (BC Minfile) is 11,067 tonnes yielding 32,677 kg Ag, 1674 tonnes Pb, 1068 tonnes Zn, 2041 g Au and minor Cu and Cd. Recent work, to 2011, included mainly sampling of former dumps.

The main vein averaged up to 0.3 m in width, was continuous for 600 meters and was mined for a vertical relief of approximately 350 meters. It is hosted in coarse-grained middle Jurassic granodiorite, part of the Nelson plutonic suite.

### **Whitewater (BC Minfile 082KSW033)**

Whitewater and several other small past producers are located just north of Kaslo Creek, a few km northeast of Klondike Silver holdings in the Slocan Silver camp. It is a past producer with a total mine production of 471,063 tonnes and recovery of approximately 108,000 kg Ag, 54,000 kg Au, 23,132 tonnes Zn and 13,942 tonnes Pb. The deposit consists of dominantly galena-sphalerite veins at higher structural levels and replacements of limestone in lower levels. Host rocks are mainly metasediments of the Triassic Slocan Group that are cut by late dykes and numerous zones of shearing and fracturing.

### **Ainsworth camp**

The Ainsworth camp area is located on the west shore of Kootenay Lake, approximately 20 km southeast of the Slocan camp. The Ainsworth camp contains more than 50 mineral properties, many which are past-producers of lead, zinc and silver. The deposits in the camp are mainly simple quartz-carbonate veins and replacement bodies comprising shoots and lenses of galena, sphalerite, pyrite and locally pyrrhotite (Fyles, 1967). Host rocks are dominantly Paleozoic to upper Triassic micaceous schist, limestone, marble, hornblende schist and quartzite of the Lardeau, Milford and Kaslo groups, intruded by lenses of granite and pegmatite of the middle Jurassic Nelson plutonic suite. The Ainsworth area is divided into a number of distinct north-trending fault slices that are internally complex, with several generations of relatively tight to open folding.

Mineralization in the camp was first discovered in 1884, and most claims that were mined were Crown granted between then and 1900. Mineral production in the camp, to 1964 (Fyles, 1967), has totaled approximately 692, 900 tonnes mainly from four properties - the Florence (BC Minfile 082FNE016), Highlander (082FNE030), Highland (082FNE015) and No. 1 (082FNW239).

### **Tillicum (BC Minfile 082FNW234)**

Tillicum is located on the slopes of Tillicum Mountain approximately 40 km west of New Denver. In contrast to other vein deposits described above, Tillicum is classified as a gold skarn that occurs in silicified, calcified tuffs and metasediments that are intruded by Cretaceous and

Eocene quartz monzonite and monzonite stocks. Mineralization comprises mainly stratabound zones of skarn with gold, associated with pyrrhotite, pyrite, galena and sphalerite.

Tillicum has had considerable exploration, mainly in the 1980s when several high grade zones were discovered, and diamond drilling, minor underground drifting and bulk sampling were undertaken. In 1993, 5503 tonnes of ore was processed at the Goldstream mill near Revelstoke with recovery of approximately 102 kg Au and 150 kg Ag,

### **24. Other relevant Data and Information**

The author is not aware of any other relevant material data or information that would result in misleading statements regarding the Slocan Camp project.

### **25. Interpretation and Conclusions**

Klondike Silver Corp. has amalgamated most of the past producing mines and exploration properties in the Slocan Silver camp into a tenure land package that covers approximately 110 square kilometers. Klondike Silver also owns the mineral rights to 25 Crown Granted claims in the camp. The processing mill at Sandon, owned by Klondike Silver Corp., has been used as recently as 2013 to process ore mined underground in the Sandon operations. Klondike Silver has a contract with the Teck Resources smelter at Trail, British Columbia to process the lead-silver and zinc-silver concentrates that are produced at the Sandon mill. The mill is now under care and maintenance.

A number of the main exploration and past production drifts in the area of the Main Lodes at Sandon have been rehabbed and are being used for current underground exploration and access. Underground mining equipment is stored at the site and maintained by Len Palmer, mine manager for the Klondike Silver Slocan camp operations. Power for the mill and camp is supplied by BC Hydro, and permitted water is available in several of the creeks in the immediate area. The tailings ponds have been inspected recently by the Ministry of Energy and Mines, and Klondike Silver Corp. has retained Golder Associates to oversee the required geotechnical and hydrogeological remedial work.

Regional exploration in the camp focused mainly in areas of known mineralization and past producing mines. These programs were considered to be largely early phase programs, and included mainly prospecting, mapping, soil geochemistry, ground geophysical surveys, and in a few areas (Cody Creek, Stenson-Jackson basin, Payne mine), trenching. Little follow-up diamond drilling was done as the onus on these programs was to locate near surface resources that could be used directly as mill feed. Exceptions were the Wonderful property immediately adjacent to the mill site where drilling, both from surface and underground, located sufficient, though limited, ore grade material that was processed in the mill

Recommended exploration, as outlined below, should include both a surface and an underground component. It is proposed that initial underground exploration focus on the eastern extension of the Main Lodes that were mined in the Ruth-Hope mine. The author of this report believes that intersections of vein mineralization in this area, reported by Treminc Resources Ltd. in 1993, are a viable exploration target.

It is the opinion of the author that the outlined exploration proposals, both underground and on surface, are founded on reliable data and information. Notably, the author of the

Treminco report (1993) that outlines potentially mineralized underground zones is well known and respected by the author of this report; however, it is cautioned that there are no known reserve estimates, only mineralized vein drill intersections. It is the opinion of the author that these need evaluating and confirming as noted in the recommendations.

The author is familiar with recent surface exploration by Klondike Silver in the camp and is of the opinion that the proposed recommendations are warranted. The camp has had a long history of successful exploration and mining, and has the potential for discovery of mineable reserves. However, the project faces the usual economic risks and uncertainties common to precious and base metal projects worldwide.

### **26. Recommendations**

Recommendations for exploration work on the property are based in large part with discussions with management and staff of Klondike Silver Corp. and private consultants, D. Makepeace (P.Eng.), M. Seabrook (P.Geo.) and L. Goldsmith (P.Eng.). These consultants are familiar with the property, having worked in the camp extensively in past years, and both D. Makepeace and L. Goldsmith continue to act as consultants to Klondike Silver Corp. As the property has had a long history of exploration, development and mining, specific recommendations and cost estimates are difficult. However, it is recommended that underground exploration should initially focus on the projected eastern extension of the Main Lode in the Ruth-Hope mine area, and surface exploration on evaluating some of the higher grade past producers in the camp that Klondike Silver now owns. Work requirements dictated by the Ministry of Energy and Mines are not dealt with here. These are requirements that have been outlined previously in this report and must be completed before any mining or processing of ore at the mill is undertaken. Exploration recommendations include:

#### **Phase 1: Silvana Mine underground exploration**

1. 4625 E Lateral, Hope mine: rationale - projected extensions of the Main lode between 4625 Level and the 4410 E Level have not been tested; several pre 1993 underground drill holes, by a previous mine owner Treminco Resources Ltd., intersected vein mineralization in this region, but no resource nor reserve estimates were outlined. Work required includes rehabbing approximately 175 meters of the 4000 Level to provide access, drifting east on the 4625 Level approximately 100 meters, extending power from surface to the work area on the 4625 Level, and underground drilling.

#### **Phase 1: Surface exploration**

Surface exploration in the camp should be directed towards better evaluating known surface vein occurrences as well as several of the historical mines that have had little exploration since closure. Recommendations include:

1. Cody Creek area: Several past producing mines occur in the Cody Creek drainage immediately east of the Main Lodes of the Slocan camp. Work should focus on the west side of the creek, where access was difficult during the latest phase of exploration in 2010. This work should include geological mapping, a ground geophysical survey (VLF-EM), construction of an access road or trail to the Jazmine showing, and trenching.

## Slocan Silver Camp

---

2. Payne mine area: Re-evaluation of the soil geochemical program including trenching of spot anomalies rather than contoured soil anomalies.
3. Rambler mine area: compilation of all historical data, geological mapping and sampling of this past producing high-grade vein.
4. Sampling the Main Lode mine dumps (Ruth, Hope, Silversmith, Slocan King, Richmond-Eureka): Historically, zinc-rich mine material was sometimes considered uneconomic to process due to the metal's price and was diverted to mine dumps. This material was usually never historically recorded. This material may be a source of mill feed when the Company has complied with Ministry of Mines requirement. It is recommended that a systematic sampling of the dumps be undertaken to determine if indeed there is sufficient zinc-rich material that can be economically processed at the Sandon mill.

### **Phase 1: Geological Modeling**

It is proposed that a three dimensional geological model of the western portion of the Silvana and the Carnation mines be created that includes all underground workings, drill holes and detailed Lidar topography of the area. This will help to interpret the gap between these mines and will be used to strategically locate future underground development and drill targets.

#### **Cost estimates (Phase 1):**

##### Underground exploration

4000 E level rehabbing: power supply	50,000
Drifting 100 meters at \$3000/m	300,000
Underground drilling: 500 meters at \$120/m	60,000
Engineering and geology (20%)	<u>82,000</u>
	492,000
Overhead and contingencies (15%)	<u>74,000</u>
Total estimated costs, excluding GST	<b>\$566,000</b>

##### Surface exploration

Permitting	6,000
Geological mapping, compilation	20,000
Ground geophysical survey	15,000
Sampling and assaying	17,000
Trenching	<u>25,000</u>
	83,000
Overhead and contingencies (15%)	<u>11,000</u>
Total estimated costs, excluding GST	<b>\$94,000</b>

##### Geological modeling

Construction of the 3D model	100,000
Lidar survey	<u>50,000</u>
	<b><u>\$150,000</u></b>

**Total estimated Phase 1 exploration costs: \$810,000**

### Phase 2: Surface exploration

Phase 2 regional exploration recommendations are dependent on the success of Phase 1 programs and are not outlined here.

### 27. References

- Ash, W.M., Gilmour, W.R. and Waldegger, M. (2015): Amended preliminary economic assessment technical report on the Willa property, Slocan Mining Division; NI 43-101 Technical report for Discovery Ventures Inc.
- Beaudoin, G., Roddick, J.C. and Sangster, D.F. (1992a): Eocene age for Ag-Pb-Zn vein and replacement deposits of the Kokanee Range, southeastern British Columbia; *Canadian Journal of Earth Sciences*, volume 29, pages 3-14.
- Beaudoin, G., Sangster, D.F. and Godwin, C.I. (1992b): Isotopic evidence for complex Pb sources in the Ag-Pb-An-Au veins of the Kokanee Range, southeastern British Columbia; *Canadian Journal of Earth Sciences*, volume 29, pages 418-431.
- B.C. Geological Survey (2012): MINFILE BC mineral deposit database: *B.C. Ministry of Energy and Mines*.
- Cairnes, C.E. (1934): Slocan mining camp, British Columbia; *Geological Survey of Canada*, Memoir 173.
- Carr, S.D., Parrish, R.R. and Brown, R.L. (1987): Eocene structural development of the Valhalla complex, southeastern British Columbia; *Tectonics*, volume 6, pages 175-196.
- Cliff, J. (2012): 2011 Prospecting report, “Ricoridge property”; B.C. Ministry of Energy and Mines, Assessment report 33346, 9 pages.
- Fyles, J.T. (1967): Geology of the Ainsworth-Kaslo area, British Columbia; B.C. Ministry of Energy and Mines, Bulletin 53,
- Goldsmith, L.B. (1987): Orientation soil geochemical and geological surveys, Iron Mask, Condor and Bolo 1 mineral claims, Silverton Creek, Silverton, British Columbia; *B.C. Ministry of Energy and Mines*, Assessment report 16,247.
- Goldsmith, L.B. (2012): Enterprise 5 level dump, 2012 sampling program, Enterprise claim group, Slocan Mining Division, Silverton, British Columbia; *B.C. Ministry of Energy and Mines*, Assessment report 33,920, 23 pages.
- Goldsmith, L.B. (2014): Geology and XRF analyses, Silvana mineral claim group, Slocan Mining Division, Sandon, British Columbia; *B.C. Ministry of Energy and Mines*, Assessment report 34,803, 44 pages.
- Good, D.R. (2008): “B” Horizon Soil Geochemistry (2007) Cody Creek. Southeastern British Columbia. *B.C. Ministry of Energy and Mines*, Assessment report 30335, 28 pages.
- Good, D.R. and Höy, T. (2008): “B” Horizon Soil Geochemistry (2007) Jackson mine, southeastern British Columbia. *B.C. Ministry of Energy and Mines*, Assessment report 30323, 27 pages.
- Heather, K.B. (1985): The Alwyn Creek gold-copper-silver deposit, southeastern British Columbia; unpublished M.Sc. thesis, Queens University, Kingston, Ontario.

## Slocan Silver Camp

---

- Hedley, M.S. (1952): Geology and ore deposits of the Sandon area, Slocan mining camp, British Columbia; *B.C. Department of Mines*, Bulletin 29.
- Höy, T. (2005): The Slocan Silver Camp, Sandon, B.C.; Technical report, prepared for *Klondike Silver Corp.*, 43 pages.
- Höy, T. (2006): Soil geochemistry, Stenson property, southeastern British Columbia; B.C. Ministry of Energy and Mines, Assessment report 28,485, 30 pages.
- Höy, T. and Belton, B.A., (2008): Ground geophysics (magnetic and VLF survey), Stenson property, southeastern British Columbia; B.C. Ministry of Energy and Mines, Assessment report 30081, 20 p.
- Höy, T., Good, D.R. and Jackaman, W. (2009): Soil Geochemistry Report on the Cody Creek Property. *B.C. Ministry of Energy and Mines*, Assessment report 31036, 80 pages.
- Klepacki, D.W. (1985): Stratigraphy and structural geology of the Goat Range, southeastern British Columbia; PhD thesis; *Michigan Institute of Technology*.
- Lefebure, D.W and Church, B.N. (1996): Polymetallic veins Ag-Pb-Zn+/-Au; in Mineral Deposit Profiles, Volume 2; *B.C. Ministry of Energy and Mines*; Open File 1996-13.
- Little, H.W. (1960): Nelson map-area, west half, British Columbia; *Geological Survey of Canada*, Memoir 308.
- Monger, J.W.H., Price, R.A. and Tempelman-Kluit, D.J. (1982): Tectonic accretion and the origin of the two major plutonic welts in the Canadian Cordillera; *Geology*, volume 1, pages 70-75.
- Reynolds, P.H. and Sinclair, A.J. (1971): Rock and lead isotopes from the Nelson batholith and Kootenay arc, British Columbia, Canada; *Economic Geology*, volume 66, pages 259-266.
- Seabrook, M.S. (2010): Underground drilling in the Wonderful mine property, southeastern British Columbia; *B.C. Ministry of Energy and Mines*, Assessment report 31440,
- Seabrook, M.S. and Höy, T. (2009a): Soil Geochemistry and Prospecting, Mt. Con property, Southeastern British Columbia. *B.C. Ministry of Energy and Mines*, Assessment report 31026, 62 pages.
- Seabrook, M.S. and Höy, T. (2009b): Soil Geochemistry and Prospecting, Payne property, southeastern British Columbia. *B.C. Ministry of Energy and Mines*, Assessment report 31,028, 188 pages.
- Seabrook, M.S. and Höy, T. (2009b): Ground geophysics and geological mapping, Jackson basin property-Stenson Group, southeastern British Columbia. *B.C. Ministry of Energy and Mines*, Assessment report 31,045, 86 pages.
- Seabrook, M.S. and Höy, T. (2010a): Soil geochemistry and geological mapping, Sandon Peak property, southeastern British Columbia. *B.C. Ministry of Energy and Mines*, Assessment report 31,481, 67 pages.
- Seabrook, M.S. and Höy, T. (2010c): Soil geochemistry, geophysics, trenching and diamond drilling, Hewitt property, southeastern British Columbia; B.C. Ministry of Energy and Mines, Assessment report 31,518, 159 pages.

## Slocan Silver Camp

---

- Seabrook, M.S. and Höy, T. (2010a): Trenching, Jackson basin property-Stenson Group, southeastern British Columbia. *B.C. Ministry of Energy and Mines*, Assessment report 31,566, 47 pages.
- Seabrook, M.S. and Höy, T. (2010b): Geophysics, geological mapping and trenching, Payne property, Southeastern British Columbia. *B.C. Ministry of Energy and Mines*, Assessment report 31,631, 94 pages.
- Seabrook, M.S. and Höy, T. (2011): Geological mapping, trenching and prospecting Cody Creek Property, southeastern British Columbia; B.C. Ministry of Energy and Mines, Assessment report 32,249, 42 pages.
- Seabrook, M.S. and Höy, T. (2011): Trenching and prospecting, Payne property, southeastern British Columbia; 2010 Exploration report; B.C. Ministry of Energy and Mines, Assessment report 32,432, 56 pages.
- Seabrook, M.S., Höy, T. and Belton, B.A. (2009): Soil geochemistry, ground geophysics, geological mapping and prospecting, Jackson basin property-Jackson Group, southeastern British Columbia. *B.C. Ministry of Energy and Mines*, Assessment report 31034, 162 pages.

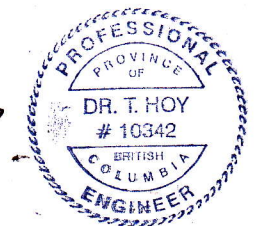
**Appendix 1: Certificate of Qualified Person**

I, Trygve Höy, do hereby certify that:

1. I am a geologist and Professional Engineer, registered with the Association of Professional Engineers and Geoscientists in the province of British Columbia (P.Eng. 1976).
2. I reside at 2450 Dixon Road, Sooke, British Columbia, V9Z 0X6.
3. I graduated from the University of British Columbia with a Bachelor's Degree in geology in 1968.
4. I graduated from Carleton University, Ottawa, Ontario with a Master's Degree in geology in 1970.
5. I graduated from Queens University, Kingston, Ontario with a PhD in geology in 1974.
6. I have worked for 41 years as a geologist in British Columbia, 27 years as a research and field geologist with the B.C. Geological Survey Branch and 14 years as an independent mineral exploration consultant.
7. I have a thorough understanding of the geology of British Columbia and have published numerous refereed papers and geological maps that relate to the geology of southern B.C.
8. I was contracted by Klondike Silver Corp. to prepare this independent report on the Slocan Silver camp.
9. I have read the definition of "qualified person" set out in the National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with professional associations (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
10. I have read NI 34-101 and 43-101F1 and the Technical Report has been prepared in compliance with these guidelines.
11. I am familiar with Slocan Silver camp, having managed exploration programs for Klondike Silver Corp. in the camp from 2005 to 2010, worked on many properties in the camp during this period, published and co-published numerous Assessment reports on the camp, and visited the camp most recently in June, 2016.
12. I am independent of the issuer as described in Section 1.4 of NF43-101. However, I own a limited number of common shares (1400) in Klondike Silver Corp.
13. I am responsible for the preparation of this report, entitled "*The Slocan Silver Camp, Sandon, British Columbia*", dated June 28, 2016.
14. At the date of this report, and to the best of my knowledge, information and belief, the Technical Report contains all the scientific and technical information that is required to be disclosed to render the Report not misleading.

Dated this 28<sup>th</sup> Day of June, 2016.

  
Trygve Höy, Ph.D; P.Eng





## Appendix 2: Klondike Silver Corp. mineral tenures

Tenure Number	Claim Name	Tenure Type	Tenure Sub Type	Map	Issue Date	Good To Date	Status	Area (ha)
257273		Mineral	Lease	082F094	1967/dec/11	2016/dec/11	GOOD	28.57
394719	OGEMA	Mineral	Claim	082K005	2002/jul/07	2023/dec/05	GOOD	25.0
395046	OLD TOM MOORE	Mineral	Claim	082K005	2002/jul/21	2020/jul/01	GOOD	25.0
505872		Mineral	Claim	082K	2005/feb/04	2020/mar/23	GOOD	311.374
506446		Mineral	Claim	082F	2005/feb/09	2018/dec/05	GOOD	83.114
506449		Mineral	Claim	082F	2005/feb/09	2018/dec/05	GOOD	20.776
506457		Mineral	Claim	082F	2005/feb/09	2018/dec/05	GOOD	20.779
506458		Mineral	Claim	082F	2005/feb/09	2018/dec/05	GOOD	20.78
506463		Mineral	Claim	082F	2005/feb/09	2018/dec/05	GOOD	41.545
506465		Mineral	Claim	082F	2005/feb/09	2020/jan/01	GOOD	62.327
506476		Mineral	Claim	082F	2005/feb/09	2018/dec/05	GOOD	62.313
506477		Mineral	Claim	082F	2005/feb/09	2018/dec/05	GOOD	103.89
506478		Mineral	Claim	082F	2005/feb/09	2018/dec/05	GOOD	41.555
506479		Mineral	Claim	082F	2005/feb/09	2020/jan/01	GOOD	20.775
506480		Mineral	Claim	082F	2005/feb/09	2020/jan/01	GOOD	20.775
506481		Mineral	Claim	082F	2005/feb/09	2018/dec/05	GOOD	83.11
506482		Mineral	Claim	082F	2005/feb/09	2018/dec/05	GOOD	41.555
506495		Mineral	Claim	082F	2005/feb/09	2020/mar/23	GOOD	207.669
506537		Mineral	Claim	082F	2005/feb/10	2018/dec/05	GOOD	20.769
507060		Mineral	Claim	082F	2005/feb/14	2018/dec/05	GOOD	540.361
512524	MOUNTAIN CHIEF	Mineral	Claim	082F	2005/may/13	2018/dec/05	GOOD	228.419
513745		Mineral	Claim	082K	2005/jun/01	2018/dec/05	GOOD	83.066
521314	ZUMI	Mineral	Claim	082F	2005/oct/18	2020/mar/23	GOOD	20.768
531786	COM 1	Mineral	Claim	082F	2006/apr/11	2018/dec/05	GOOD	520.013
538811	WONDERFUL	Mineral	Claim	082F	2006/aug/06	2018/dec/05	GOOD	519.329
551378	SILVERTON HIGH GRAD	Mineral	Claim	082K	2007/feb/07	2020/jul/01	GOOD	228.3708
576935	DIANA 1	Mineral	Claim	082F	2008/feb/23	2018/dec/05	GOOD	519.6363
576942	DIANA 2	Mineral	Claim	082F	2008/feb/23	2018/dec/05	GOOD	124.7505
576943	DIANA 3	Mineral	Claim	082F	2008/feb/23	2018/dec/05	GOOD	145.5755
577887	DIANA 4	Mineral	Claim	082F	2008/mar/05	2020/feb/23	GOOD	83.2072
595623	JENNIE LIND	Mineral	Claim	082F	2008/dec/06	2018/dec/05	GOOD	62.3542
598885		Mineral	Claim	082F	2009/feb/09	2018/dec/05	GOOD	374.1293
598893		Mineral	Claim	082F	2009/feb/09	2018/dec/05	GOOD	20.7756
598894		Mineral	Claim	082F	2009/feb/09	2018/dec/05	GOOD	62.3781
598896	JRBC	Mineral	Claim	082F	2009/feb/09	2018/dec/05	GOOD	20.7962
598897		Mineral	Claim	082F	2009/feb/09	2018/dec/05	GOOD	166.362
599035		Mineral	Claim	082F	2009/feb/10	2018/dec/05	GOOD	519.6126
600559	HEWITTMINERD	Mineral	Claim	082F	2009/mar/07	2020/feb/23	GOOD	41.5983
600573	HEWITTSPUR	Mineral	Claim	082F	2009/mar/07	2020/feb/23	GOOD	20.7954
601508	CLIFFTOP	Mineral	Claim	082F	2009/mar/23	2020/mar/23	GOOD	145.3783
601707	WATERHOLE	Mineral	Claim	082K	2009/mar/27	2020/jul/01	GOOD	20.7647
603541	DIANA CORNER	Mineral	Claim	082F	2009/apr/28	2018/dec/05	GOOD	20.7816
603769	BNPAYNE	Mineral	Claim	082F	2009/may/01	2020/jan/01	GOOD	20.7717
605293		Mineral	Claim	082F	2009/jun/02	2018/dec/06	GOOD	519.5989
605302		Mineral	Claim	082F	2009/jun/02	2018/dec/06	GOOD	20.7857

Number	Claim Name	Type	Sub Type	Map	Issue Date	Good To Date	Status	Area (ha)
605304		Mineral	Claim	082F	2009/jun/02	2018/dec/05	GOOD	20.7864
631124	CODYCRJNCTN	Mineral	Claim	082F	2009/sep/09	2018/dec/05	GOOD	41.5779
643184	STENSONWEST	Mineral	Claim	082K	2009/sep/29	2023/dec/05	GOOD	20.7643
654893	BESSIE	Mineral	Claim	082F	2009/oct/19	2020/feb/23	GOOD	20.7972
704726	RECORIDGE	Mineral	Claim	082F	2010/jan/25	2020/jul/01	GOOD	62.3143
705903	DARDENELLES	Mineral	Claim	082K	2010/feb/10	2023/dec/05	GOOD	83.0555
705911		Mineral	Claim	082F	2010/feb/10	2020/jul/01	GOOD	519.9701
712162	SANDONCR	Mineral	Claim	082F	2010/mar/03	2020/jul/01	GOOD	249.4672
775622	PAYNECUTBLOCK	Mineral	Claim	082F	2010/may/18	2020/jan/01	GOOD	20.7733
838451	GREEN HORN	Mineral	Claim	082F	2010/nov/17	2023/dec/05	GOOD	207.7359
843045	SILVERRIDGE	Mineral	Claim	082F	2011/jan/14	2020/jan/01	GOOD	83.0867
855186	GH 2	Mineral	Claim	082F	2011/may/18	2020/jan/01	GOOD	41.5529
855196		Mineral	Claim	082F	2011/may/18	2023/dec/05	GOOD	83.0892
855197		Mineral	Claim	082F	2011/may/18	2023/dec/05	GOOD	20.7744
855198		Mineral	Claim	082F	2011/may/18	2023/dec/05	GOOD	41.5432
855200	SS	Mineral	Claim	082F	2011/may/18	2023/dec/05	GOOD	20.7707
857747	SANDON HEADWATER	Mineral	Claim	082F	2011/jun/23	2023/dec/05	GOOD	228.7166
857767	CODY HEADWATER	Mineral	Claim	082F	2011/jun/23	2023/dec/05	GOOD	291.1142
857807	NORTH FM	Mineral	Claim	082F	2011/jun/23	2023/dec/05	GOOD	124.8088
857827	WEST FM	Mineral	Claim	082F	2011/jun/23	2023/dec/05	GOOD	62.406
894469	MADDISON ARGENTA	Mineral	Claim	082F	2011/aug/27	2025/jan/14	GOOD	83.0981
1010713	PAYNE CG'S NE	Mineral	Claim	082K	2012/jul/04	2023/dec/05	GOOD	20.7685
1010945	MT PAYNE	Mineral	Claim	082F	2012/jul/10	2020/jan/01	GOOD	20.7715
1011926		Mineral	Claim	082K	2006/apr/11	2020/mar/23	GOOD	41.5037
1011927		Mineral	Claim	082K	2006/apr/11	2020/mar/23	GOOD	249.0482
1014218	SLOCAN ALAMO CORIN'	Mineral	Claim	082F	2012/nov/02	2020/jan/01	GOOD	498.6332
1015565	SILVERITIS	Mineral	Claim	082F	2012/dec/31	2023/dec/05	GOOD	20.769
1016952	SANDON 3	Mineral	Claim	082F	2013/feb/16	2023/dec/05	GOOD	41.541
1019220	LondonLow	Mineral	Claim	082K	2006/apr/19	2018/dec/05	GOOD	352.9672
1019339	Lucky Jim 2	Mineral	Claim	082K	2012/jul/04	2023/dec/05	GOOD	20.7574
1019378	Vernon	Mineral	Claim	082K	2010/sep/01	2020/jan/01	GOOD	20.7517
1019939	McguiganCr	Mineral	Claim	082K	2006/feb/13	2018/dec/05	GOOD	290.6413
1024089	luckjimnw	Mineral	Claim	082K	2011/jan/19	2023/dec/05	GOOD	62.2572
1024091	ZinctonNW	Mineral	Claim	082K	2010/oct/21	2023/dec/05	GOOD	83.0087
1024092	Vernondrop	Mineral	Claim	082K	2010/oct/21	2020/jan/01	GOOD	20.7517
1024093	Majestic	Mineral	Claim	082F	2010/oct/21	2023/dec/05	GOOD	62.3093
1024094	Halmacdrop	Mineral	Claim	082F	2010/oct/21	2020/jan/01	GOOD	41.5431
1024236		Mineral	Claim	082K	2013/dec/04	2023/dec/05	GOOD	62.259
1027779		Mineral	Claim	082F	2006/apr/11	2018/dec/05	GOOD	436.9823
1028143	HewittN	Mineral	Claim	082F	2009/apr/29	2020/feb/23	GOOD	<u>270.3353</u>

notes: all claims are owned 100 % by Klondike Silver Corp. (201010)

Appendix 3: Klondike Silver Corp. crown grants, Slocan camp

Holder	Folio #	Account #	Hectares	Names: (Fr = Fraction)								
<u>Rambler</u>												
KS	48437	MLT-1057-2317	92.99	Antelope	Keno	Cariboo	Rambler	Jennie #3	Best Fr	Humphrey	Last chance #4	
KS	104280	MLT-1056-6574	8.36	Best								
KS	48429	MLT-1052-3827	3.70	Sincher								
<u>Van Roi - Hewett Area:</u>												
KG	37923	MLT-1057-2392	8.26	Muldoon								
KG	50270	MLT-1056-6278	112.55	Vancouver (#2)	Mountain boc	Zilor	New park	Pembroke	Hazard Fr	Prior		
KG	51888	MLT-1059-2391	115.10	Silver star	Pelly	Napier	Ricardo	Burr	El comino #2	Tramway #2 Fr		
KG	52434	MLT-1052-3837	70.43	Burnside	Lorna doone	Sam Fr	Bessie Fr	March	Marjorie Fr			
KG	53449	MLT-1052-3735	96.59	Humbolt	Rincon Fr	Rincon	Mole	Crow Fr	Tanquility	Penobscot		
KG	58459	MLT-1056-6379	18.78	Revenge								
KG	192961	MLT-1055-9347	40.44	Hewitt production area								
KG	208817	MLT-1052-5543	77.08	Edith Fr	Eliza Fr	Lottie Fr	SOB	Desperation	Apex Fr			
KG	208825	MLT-1059-3090	87.72	Hazard	Vancouver Fr	Moccasin Fr	Mackinaw	Van Roi Fr	Crown Point Fr			
KG	58734	MLT-1053-9677	1.95	Skookum Fr								
<u>Silvana Area:</u>												
Treminco	53732	MLT-1053-9693	148.32	Cinderella	Victoria	Hidden treasu	Clair	Provident	Hemlock Fr	Silver mount	Boomer Fr	Robin Fr
Treminco	129054	MLT-1056-8426	134.51	Silmonac production area								
Treminco	195880	MLT-1053-9259	620.63	(not named)								
Treminco	205567	MLT-1056-8532	72.82	Kam kotia production area								
Treminco	48739	MLT-1059-5075	80.43	Slocan Star	Wyoming	Despair	Ruth	Emma	Silversmith	Windsor	Ophir #3	
Treminco	50580	MLT-1056-6490	80.69	Richmond	Starview	Yuma	Aurora #2	Suburban Fr	Night hawk F	Aurora Fr	Yuma Fr	
Treminco	50601	MLT-1056-8754	89.64	Empire	Hidden treasu	Ruth Fr	Slocan belle	Carbajal Fr	Pembroke	Millie	Minnesota	
Treminco	50741	MLT-1054-0595	18.25	Hinckley								
Treminco	51802	MLT-1053-2898	60.92	Blue jay	Eureka #2	Mineral hill	Summit	Heber Fr	Morning sun	Shogo	Echo Fr	Silver star Fr
Treminco	53759	MLT-1057-2370	29.67	Keyser Fr	Lone batchel	D Fr						
Treminco	56774	MLT-1054-0866	78.44	Jennie	Slocan king	Rabbit paw	Eva Fr	Hillside	Belladonna	Whistler Fr	Edith Fr	
Treminco	104370	MLT-1056-8637	10.72	Victor production area "Archie"								

#### **Appendix 4: Permitting – Tailings ponds, correspondence**

---

1. Ministry of Environment:  
Correspondence  
June 3, 2015
2. Ministry of Environment  
Permit 1203  
June 16, 1972; amended June 3, 2015



June 3, 2015

Tracking Number: 334247  
Authorization Number: 1203

**REGISTERED MAIL**

Klondike Silver Corp.  
430 - 609 Granville St  
PO Box 10325 LCD Pacific Centre  
Vancouver BC V7Y 1G5

Dear Permittee:

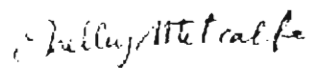
Enclosed is amended Permit 1203 issued under the provisions of the *Environmental Management Act*. Your attention is respectfully directed to the terms and conditions outlined in the permit. An annual fee will be determined according to the Permit Fees Regulation. Permit 1203 has been amended with the new registered Company name and address, updated language and amendments to Section 3 Monitoring and Reporting.

This permit does not authorize entry upon, crossing over, or use for any purpose of private or Crown lands or works, unless and except as authorized by the owner of such lands or works. The responsibility for obtaining such authority rests with the permittee. This permit is issued pursuant to the provisions of the *Environmental Management Act* to ensure compliance with Section 120(3) of that statute, which makes it an offence to discharge waste, from a prescribed industry or activity, without proper authorization. It is also the responsibility of the permittee to ensure that all activities conducted under this authorization are carried out with regard to the rights of third parties, and comply with other applicable legislation that may be in force.

This decision may be appealed to the Environmental Appeal Board in accordance with Part 8 of the *Environmental Management Act*. An appeal must be delivered within 30 days from the date that notice of this decision is given. For further information, please contact the Environmental Appeal Board at (250) 387-3464.

Administration of this permit will be carried out by staff from the Environmental Protection Division's Regional Operations Branch. Plans, data and reports pertinent to the permit are to be submitted by email or electronic transfer to the Regional Director, Environmental Protection, designate, or as further instructed.

Yours truly,

A handwritten signature in cursive script that reads "Shelley Metcalfe".

Shelley Metcalfe, P.Ag.  
for Director, *Environmental Management Act*  
Southern Interior

Enclosure

cc: Environment Canada



MINISTRY OF ENVIRONMENT

PERMIT

1203

Under the Provisions of the Environmental Management Act

Klondike Silver Corp.

430 - 609 Granville St
PO Box 10325 LCD Pacific Centre
Vancouver BC V7Y 1G5

is authorized to discharge effluent to tailings impoundments from a lead-zinc ore dressing plant located near New Denver, British Columbia, subject to the terms and conditions listed below. Contravention of any of these conditions is a violation of the Environmental Management Act and may lead to prosecution.

This permit supersedes and amends all previous versions of Permit 1203, issued under Part 2, Section 14 of the Environmental Management Act.

1. AUTHORIZED DISCHARGES

1.1 This section applies to the discharge of effluent from a LEAD-ZINC CONCENTRATOR INTO SETTLING PONDS WHICH EXFILTRATE AND INFREQUENTLY DECANT TO FLOODPLAIN ADJACENT TO CARPENTER CREEK. The site reference number for this discharge is E102980.

1.1.1 The maximum rate of discharge is 410 cubic metres per day.

1.1.2 The characteristics of the discharge must be equivalent to or better than:

Table with 2 columns: Parameter and Maximum. Rows include Total Suspended Solids (50 mg/L), pH (6.5-8.5 pH units), Total Cyanide (0.1 mg/L), Dissolved Copper (0.05 mg/L), and Dissolved Zinc (0.5 mg/L).

Date issued: November 16, 1972
Date amended: June 3, 2015
(most recent)

Signature of Shelley Metcalfe
Shelley Metcalfe, P.Ag.
for Director, Environmental Management Act
Southern Interior

- 1.1.3 The authorized works are tailings line, 4 tailings ponds, decant structure, and related appurtenances approximately located as shown on Site Plan A.
- 1.1.4 The authorized works must be complete and in operation while discharging.
- 1.1.5 Decanting to the floodplain adjacent to Carpenter Creek must cease when No. 4 Tailings Pond begins to be used to store tailings.
- 1.1.6 The location of the facilities from which the discharge originates is Lot 1648, Lot 2032 and Lot 5363, Kootenay District.
- 1.1.7 The location of the point of discharge is Lot 1648, Lot 2032 and Lot 5363, Kootenay District; and 60 m N, 45°E from the SW corner of S.U.P. 6658 to Carpenter Creek; and 250 m N, 45°W from the same point, then N, 45°E to Carpenter Creek.

## 2. GENERAL REQUIREMENTS

### 2.1 Tailings Pond Assessment

The permittee must retain, at the discretion of the Director, a qualified geotechnical engineer who must assess and make recommendations concerning the long-term integrity of the tailings ponds, particularly with respect to permanent protection against washout by Carpenter Creek. The permittee may then be required to construct additional works, based on the recommendations of the engineer and an assessment by the Regional Operations Branch.

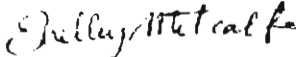
### 2.2 Program of Improvements

When tailings pond No.4 is constructed and is in use for the storage of fine tailings, a water recycle system must be used to prevent the direct discharge via decanting of supernatant to Carpenter Creek.

### 2.3 Process Modification

The Director must be notified prior to implementing changes to any process that may adversely affect the quality and/or quantity of the discharge. Despite notification under this section, permitted levels must not be exceeded.

Date issued: November 16, 1972  
Date amended: June 3, 2015  
(most recent)

  
Shelley Metcalfe, P.Ag.  
for Director, *Environmental Management Act*  
Southern Interior



#### 2.4 Maintenance of Works and Emergency Procedures

The authorized works must be inspected regularly and maintained in good working order. In the event of an emergency or condition beyond the control of the Permittee which prevents effective operation of the authorized works or leads to an unauthorized discharge, the Permittee must take appropriate remedial action and notify the Director immediately. The Director may reduce or suspend operations to protect the environment until the authorized works has been restored, and/or corrective steps taken to prevent unauthorized discharges.

#### 2.5 Mill Reagents

The permittee must take appropriate measures to reduce to a minimum the quantity of cyanide, copper and zinc reagents used in the concentrator. The amount and type of reagents used in the ore processing must be recorded and available for inspection by Ministry personnel.

#### 2.6 Bypasses

Any bypass of the authorized works is prohibited unless the approval of the Director is obtained and confirmed in writing.

#### 2.7 Tailing Disposal

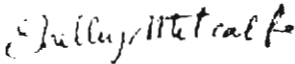
Since both ponds #1 and #2 are considered full of solids, the following operating practice is to be followed:

- (1) In the event of an emergency in the mill that requires the dumping of mill tanks, the tailings and other process solids may be discharged to tailings pond #1 during the incident and the shutting down of the mill
- (2) Under normal mill operation the tailings will be directed to pond #3. The decant from pond #3 will be collected and pumped back to pond #1, thence decanting to pond #2 and thence piped around pond #3 and discharged to the floodplain adjacent to pond #3 where it will be allowed to infiltrate into the ground.

#### 2.8 Resuming Operations

Prior to resuming operations, the Permittee must:

Date issued: November 16, 1972  
Date amended: June 3, 2015  
(most recent)

  
Shelley Metcalfe, P.Ag.  
for Director, *Environmental Management Act*  
Southern Interior

- (1) Provide a revised effluent discharge plan to the Director for approval.
- (2) Provide an environmental monitoring and reporting plan to the Director.
- (3) Have complied with requirements imposed by the Ministry of Energy and Mines in the letter issued October 2, 2013 for M-65 under the *Mines Act* with respect to the tailings impoundment and any other requirements set by the Chief Inspector with respect to the tailings impoundment; and provide adequate documentation showing compliance has been achieved.

### 3. MONITORING REQUIREMENTS

The following requirements are applicable whether the mill is in operation, care and maintenance, or period of inactivity, such that there is no period without monitoring.

#### 3.1 Sampling

##### 3.1.1 Location and Techniques

All sampling locations, techniques and equipment require the consent of the Director prior to use. Sampling and monitoring data, which also should include rate of discharge measurements, must be accompanied by process data relevant to the operation of the source of the effluent and to the performance of the pollution abatement equipment involved in the testing.

##### 3.1.2 Sampling Procedures

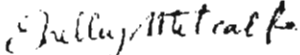
Sampling is to be carried out in accordance with the procedures described in the "British Columbia Field Sampling Manual for Continuous Monitoring and the Collection of Air, Air-Emission, Water, Wastewater, Soil, Sediment, and Biological Samples, 2013 Edition", or most recent edition, or by suitable alternative procedures as authorized by the Director.

A copy of the above manual is available on the Ministry web page at [http://www.env.gov.bc.ca/epd/wamr/labsys/lab\\_meth\\_manual.html](http://www.env.gov.bc.ca/epd/wamr/labsys/lab_meth_manual.html).

##### 3.1.3 Analytical Procedures

Analyses are to be carried out in accordance with procedures described in the "British Columbia Environmental Laboratory Manual, 2013 Edition", or the

Date issued: November 16, 1972  
Date amended: June 3, 2015  
(most recent)

  
Shelley Metcalfe, P.Ag.  
for Director, *Environmental Management Act*  
Southern Interior

most recent edition, or by suitable alternative procedures as authorized by the Director.

A copy of the above manual is available on the Ministry web page at [http://www.env.gov.bc.ca/epd/wamr/labsys/lab\\_meth\\_manual.html](http://www.env.gov.bc.ca/epd/wamr/labsys/lab_meth_manual.html).

### 3.2 Monitoring

#### 3.2.1 Effluent Monitoring

On a bi-weekly basis when there is discharge, obtain analyses of a grab sample of the effluent at the final stage of treatment, for the following parameters:

**Total Suspended Solids**  
**pH**  
**Total cyanide**  
**Weak acid Dissociable Cyanide**  
**Dissolved sulphate (SO<sub>4</sub>)**  
**Total and Dissolved Cd**  
**Total and Dissolved Cu**  
**Total and Dissolved Fe**  
**Total and Dissolved Zn**  
**Total and Dissolved Pb**

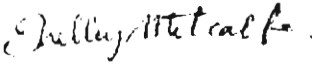
At least once per year when there is discharge, obtain a representative sample of the effluent as defined above and analyze for acute toxicity to rainbow trout using LC<sub>50</sub> testing procedures.

#### 3.2.2 Receiving Water Monitoring

At least once per year when there is discharge, or as directed by the Director, obtain a grab sample of Carpenter Creek above and below the influence of the milling operation and analyze for the following parameters:

Total copper, zinc, lead and cadmium

Date issued: November 16, 1972  
Date amended: June 3, 2015  
(most recent)

  
Shelley Metcalfe, P.Ag.  
for Director, *Environmental Management Act*  
Southern Interior

### **3.3 Flow Measurement**

The permittee must install and maintain a suitable flow measuring device and record once per day during mill operation and if there is discharge during care and maintenance, the effluent volume discharged over an eight hour period.

## **4. REPORTING REQUIREMENTS**

The following requirements are applicable whether the mill is in operation, care and maintenance, or period of inactivity, such that there is no period without reporting.

### **4.1 Reporting**

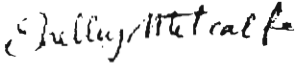
- a. Maintain data of analyses and flow measurements for inspection and submit the data, suitably tabulated, to the Director, for the previous quarter. All reports must be electronically submitted within 30 days of the end of the quarter.
- b. A summary of all emergency incidents, including the date, time, duration and volume discharged, that occurred during the previous quarter must be reported in the quarterly report.

Each data submission must include a statement outlining the number of exceedances of permitted levels that occurred during the reporting period. The dates of the exceedances must be clearly identified in the data submission and an explanation as to the cause of the exceedances and a description of the measures taken to rectify the situation must be provided. Should no exceedances have occurred over the reporting period, a statement to that effect must be included.

### **4.2 Annual Report and Evaluation**

- a. An Annual Report must be electronically submitted to the Regional Environmental Protection office on or before March 31<sup>st</sup> each year. The Annual Report must review and interpret the monitoring data for the preceding calendar year, and provide a graphical analysis with suitable interpretation of any trends in monitoring results by a qualified professional. An evaluation of the onsite laboratory analysis, quality and precision must be included and based on the results of the quality assurance program.
- b. Each data submission must include a statement outlining the number of exceedances of permitted levels that occurred during the reporting period.

Date issued: November 16, 1972  
Date amended: June 3, 2015  
(most recent)

  
Shelley Metcalfe, P.Ag.  
for Director, *Environmental Management Act*  
Southern Interior

The dates of the exceedances must be clearly identified in the data submission and an explanation as to the cause of the exceedances and a description of the measures taken to rectify the situation must be provided. Should no exceedances have occurred over the reporting period, a statement to that effect must be included.

#### **4.3 Spill Reporting**

All spills to the environment (as defined in the Spill Reporting Regulation) must be reported immediately in accordance with the Spill Reporting Regulation. Notification must be via the Provincial Emergency Program at 1-800-663-3456.

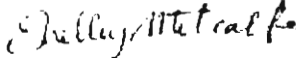
#### **4.4 Non-compliance Reporting**

The Permittee must immediately notify the Director or designate of any non-compliance with the requirements of this Permit and take appropriate remedial action. Written confirmation of all non-compliance events, including available test results is required within 24 hours of the original notification unless otherwise directed by the Director, Environmental Protection.

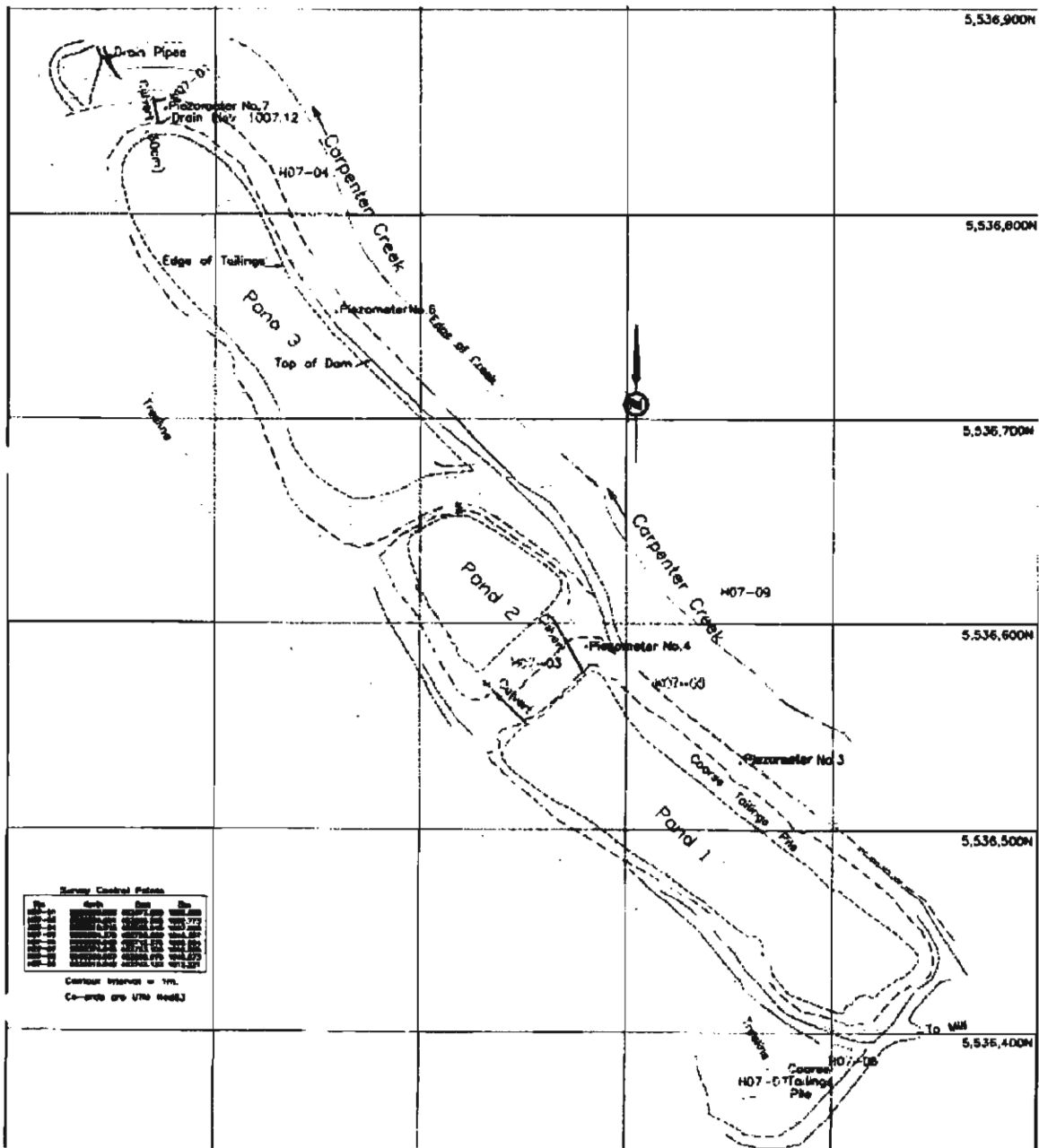
With 30 days of the non-compliant event, the Permittee must submit to the Director, Environmental Protection, a written report including, but not necessarily limited to, the following:

- a. all relevant test results related to the noncompliance,
- b. an explanation of the most probable cause(s) of the noncompliance, and
- c. remedial action planned and/or taken to prevent similar noncompliance(s) in the future.

Date issued: November 16, 1972  
Date amended: June 3, 2015  
(most recent)

  
Shelley Metcalfe, P.Ag.  
for Director, *Environmental Management Act*  
Southern Interior

Site Plan A



Date issued: November 16, 1972  
Date amended: June 3, 2015  
(most recent)

*Shelley Metcalfe*  
Shelley Metcalfe, P.Ag.  
for Director, *Environmental Management Act*  
Southern Interior