

# Hecla Reports Record Silver, Gold and Lead Reserves

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[Hecla Mining Company](#) (NYSE:HL) today reported the highest silver, gold and lead reserves in its 128-year history and provided an update on its exploration programs during the fourth quarter of 2018.

## Highlights

- Reserve gains are from consistent long-term exploration programs and improved use of data.
- Greens Creek, which generates approximately 50% of Hecla's revenues, increased reserve tons 23%, silver ounces 19%, gold ounces 16%, zinc tons 15%, and lead tons 17%, giving a mine life from reserves alone of approximately 11 years.
- Casa Berardi, which generates approximately 35% of Hecla's revenues, increased reserve tons 70%, and gold ounces 28% with the expansion of Principal pit and the addition of the new West Mine Crown Pillar (WMCP) pit.
- Reserves grew while using price assumptions of \$14.50/oz silver (expected to be among the lowest in the industry), \$1,200/oz gold, \$1.15/lb zinc and \$0.90/lb lead; all below current spot prices (Figure 1).

"Reserves in stable jurisdictions are a mining company's most important asset. Hecla now has the largest reserve in its 128-year history and its largest single year increase because of exploration. The increase reflects the quality of the districts we control; our long-term, consistent strategy; and the capturing and use of all the data that long-lived mines have," said Phillips S. Baker, Jr., President and CEO. "We have achieved this while the industry has generally seen declining reserves and we were able to use among the most conservative price assumptions in the industry because of the strong economics of these deposits."

"It is particularly important that this growth comes at Greens Creek and Casa Berardi, who generate approximately 85% of our revenue and most of our operations' free cash flow. These mines are Hecla's best," Mr. Baker added. "But we expect our other mines to do the same over the next few years. We are working hard at San Sebastian to extend the oxide mine life and to put the sulfides into production. We are just starting our work in Nevada, reducing the reserve to better reflect the geology, with the goal of building a solid base for consistent production."

## Key Reserve and Resource Statistics (2018 compared to 2017)

- Record proven and probable gold reserves of 2.85 million ounces, an increase of 26% (Figure 2).
- Record proven and probable silver reserves of 191 million ounces, an increase of 8% (Figure 3).
- Record proven and probable lead reserves of 774,000 tons, an increase of 5%. Proven and probable zinc reserves of 931,730 tons, an increase of 11% and the highest since 2009.
- The silver reserve of 107.1 million ounces at Greens Creek is the highest since it was 100% acquired in 2008. Gold reserves at Casa Berardi increased approximately 28% to 1.91 million ounces, the highest since 1990.
- Measured and indicated gold ounces increased 44% to 7.0 million ounces, a gain of 2.15 million ounces over 2017. Measured and indicated silver ounces increased 65% to a record 208 million ounces, an increase of 82 million ounces over 2017.
- Inferred gold resources increased 96% to 3.6 million ounces and a gain of 1.8 million ounces. Inferred silver resources increased 4% to 465 million ounces and a gain of 17 million ounces.

## Exploration

- Greens Creek:
  - Underground drilling continues to expand high-grade, near-surface resources at the Upper Plate and East Ore zones and add to mineralized trends along the Deep 200 South, Southwest Bench and Lower Southwest zones.

- Casa Berardi:
  - Underground drilling was able to upgrade and expand reserves and resources in the 118, 121, 123, 124, 125, 128 and 160 zones and confirm further potential at depth and to the east and west.
  - Surface drilling completed on the West Mine Crown Pillar (WMCP) extended the resource to the west. Step-out drilling of the 128-129 zones east of the proposed Principal pit and near the proposed 160 pit has defined high-grade extensions.
- San Sebastian:
  - Drilling at the West Francine, El Toro (South) and Esperanza veins continue to define near-surface, oxide mineralization.
- Nevada:
  - Underground drilling at Fire Creek is identifying extensions to the Vonnie, Joyce, Karen and Honey Runner high-grade veins/structures in the Spiral 2, 3 and 4 areas.
  - Underground drilling at Hollister is identifying new mineralization in the West Gloria, East Clementine and Gwenivere areas.

“The 2018 exploration program was very successful at not only our mines but at some of our exploration properties. However, for 2019 the focus will be on San Sebastian, Casa Berardi and Nevada, of which Nevada is estimated to be about half of the budget,” said Mr. Baker. “We believe that after a few years of committed exploration there, we could see results similar to what was achieved in 2018.”

## RESERVES AND RESOURCES

Hecla more than replaced gold production in 2018 (318,901 gold ounces contained) as reserves increased by 26% over 2017, and gold reserve prices were calculated at \$1,200/oz. Silver production in 2018 (12.9 million silver ounces contained) was also more than replaced as reserves increased by 8%, despite using \$14.50/oz for the reserve calculation. In the last 11 years, Hecla has not only replaced silver production but added another 200 million ounces through exploration (Figure 4). Both zinc and lead production were replaced and reserves increased by 11% and 5%, respectively.

Measured and indicated gold ounces increased 44% to 7.0 million ounces, a gain of 2.15 million ounces over 2017 due to increases at Greens Creek and the acquisition of the Nevada properties. Measured and indicated silver ounces increased 65% to a record 208 million ounces, an increase of 82 million ounces over 2017 due to a large increase at Greens Creek, San Sebastian and the addition of the Nevada properties. Inferred gold resources increased 96% to 3.6 million ounces and a gain of 1.8 million ounces primarily due to the acquisition of the Nevada properties. Inferred silver resources increased 4% to 465 million ounces, a gain of 17 million ounces due to increases at San Sebastian, Greens Creek, and the acquisition of Nevada properties.

### Greens Creek

At Greens Creek, the 845,398 tons processed at the mill in 2018 contained 10.3 million ounces of silver, 79,087 ounces of gold, 63,116 tons of zinc, and 23,656 tons of lead. Silver, gold and base metal production was replaced, and silver, gold, zinc, and lead reserves increased by 18.7%, 15.8%, 14.9%, and 16.8%, respectively, over 2017 reserves. The current silver reserve of 107.1 million ounces is the highest since 2008, the year Hecla acquired 100% of the mine. The current gold reserve of 840k ounces is the highest since 2009. Increases in silver and gold reserves at the 200 South, Gallagher, West, 9A, and Southwest zones were partially offset by reductions of silver and gold reserves in the 5250 Zone caused by mine depletion.

Measured and indicated resources increased by 66,134,100 silver ounces (211%) and 467,700 gold ounces (181%) over 2017 with additions in the West, Southwest, 9A, and 200 South zones and losses in the Gallagher and East zones due to conversion to reserves. New drilling and remodeling of areas historically mined at higher cutoffs were responsible for the increases in Measured and indicated resources. Inferred resources increased by 3,271,900 silver ounces (10%) and decreased by 3,200 gold ounces (-1%) due to large conversions to indicated resources or reserves in the 200 South, Upper Plate and East Ore zones.

A new NI 43-101 Technical Report is expected within 45 days. The optimized mine plan accelerates access to higher-grade ore, and allows some of the highest-margin reserves to be extracted in the earlier years of

the mine plan. It also utilizes more of the existing workings during the next four years which reduces the planned development investment required. In addition, the increase in reserves is expected to extend the mine life by about three years to 2030.

#### Casa Berardi

At Casa Berardi, the 1,375,718 tons processed at the mill contained approximately 162,744 ounces of gold, with 744,952 tons (54%) of the milled tonnage coming from underground and 630,776 tons (46%) of the milled tonnage coming from the East Mine Crown Pillar (EMCP) open pit. Gold reserves increased approximately 28% to 1.91 million ounces and reserve tonnage at Casa Berardi increased 71% to 23.7 million tons over 2017. Depletion decreased underground reserve ounces in the 104 (Lower Inter), 113, 118, 123 and 124 zones. This was offset by reserve additions in the west extension of the EMCP as well as 134 and 160 pits. Substantial reserve increases occurred in the proposed WMCP and Principal pits where some underground reserves were incorporated into an expanded pit. There was an overall reduction in underground reserves of 176,400 gold ounces and an increase of open pit reserves of 589,600 gold ounces compared to 2017.

Measured and indicated gold resources decreased 12% from 2017 levels as gains from underground drilling of the 119 and 123 zones and 134 and 160 open pits were offset by decreases at the 107 (South West), 108 (Inter), 111, 113, 115, 117, 118, 121, 124, and 160 underground. The largest decreases were a result of incorporation of the 107 (South West) and 160 underground to open pit reserves. Inferred gold resources decreased 9% from 2017 levels as increases at the 105, 116, 124, 134, 146, 157, and 160 (underground and open pit) zones were offset by losses to inferred resources in the 107 (South West) 108 (Inter) 118, 119, 121, 123, 148, and 160 underground and open pit zones by conversion to indicated resources. Significant losses to inferred resources in the 107 and 108 zones were due to resource upgrades and incorporation into the new WMCP pit. A new NI-43-101 Technical Report is expected within 45 days.

#### San Sebastian

At San Sebastian, the 156,733 tons processed at the mill contained 2.04 million ounces of silver and 14,979 ounces of gold. Reserves are currently 2.8 million ounces of silver and 22,500 ounces of gold. At the end of the year there was an ore stockpile containing 84,700 silver ounces and 1,800 ounces of gold. The total underground reserves in the Middle Vein are 2.33 million ounces silver and 11,900 ounces gold and represent 83% and 53% of the silver and gold reserves, respectively. The total open pit reserves in the North Vein are 377,600 ounces silver and 8,800 ounces gold and represent 14% and 39% of the silver and gold reserves, respectively.

Due to significant definition drilling, the indicated resources increased from 2017 by 67% for silver to 14.7 million ounces, 11% for gold to 114,700 ounces, 110% for zinc to 42,710 tons, 96% for lead to 30,410 tons, and 119% for copper to 19,780 tons. Indicated Resources are separated into ‘Oxide’ and ‘Polymetallic’ mineral styles; oxide is cyanide-amenable material and polymetallic is base-metal-sulfide-rich material amenable to a flotation milling process. Polymetallic resources were defined and extended at depth on the Francine and Middle Veins during 2018. Polymetallic mineralization has zinc, lead and copper and represents 54% of the silver and 17% of the Measured and indicated gold resources. The inferred resource increased from 2017 by 44% for silver to 22.9 million ounces and 50% for gold to 142,700 ounces due to new material being added along the Middle Vein and in the East Francine areas. Lead, zinc and copper decreased by 62%, 64% and 11%, respectively, as a direct result of conversion of polymetallic mineralization in the Francine Vein from inferred to indicated.

Open pit mining continued in 2018 in the expanded North pit to the west and at depth and an additional smaller ‘satellite pit’ to the west and mining of this pit is expected to continue into 2020. New high-grade, precious metal resources on the Professor and East Francine veins are being evaluated for underground mine design and scheduling. Possible conversion of polymetallic veins in the Francine Vein to reserves will be dependent on metallurgical testing of the bulk sample and stope optimizations. The material from the bulk sample will be used for metallurgical studies and a viability test at a nearby mill, where the processing of polymetallic sulfide ores from San Sebastian is planned.

#### Lucky Friday

At Lucky Friday, the 17,309 tons processed at the mill contained approximately 186,609 ounces of silver,

673 tons of zinc and 1,131 tons of lead. Reserves are currently 81.0 million ounces of silver, 510,800 tons of lead and 225,260 tons of zinc and are essentially unchanged relative to 2017. Measured and indicated resources have increased 3% for silver to 77.4 million ounces, 3% for lead to 499,070 tons and 4% for zinc to 265,970 tons. Inferred resources remained relatively unchanged year-over-year and include 24.8 million ounces of silver, 181,180 tons of zinc and 74,340 tons of lead.

#### Fire Creek

At Fire Creek, the 47,573 tons processed at the mill for Hecla in 2018 contained approximately 17,993 ounces of gold and 22,482 ounces of silver. Reserves at Fire Creek are 69,300 ounces gold and 56,900 ounces of silver and are a reduction from the second quarter of 2018 primarily due to model changes that interpret the veins to be thinner (47% of reduction), mining depletion (29% of reduction), and increased costs resulting in higher cut-off grades (17% of reduction). Measured and indicated underground resources are 215,200 ounces of gold and 197,900 ounces of silver and inferred resources are 298,700 ounces of gold and 288,400 ounces of silver.

#### Hollister

At Hollister, the 32,286 tons processed at the mill for Hecla in 2018 contained approximately 11,779 ounces of gold and 106,056 ounces of silver. Reserves at Hollister are 7,600 ounces of gold and 82,400 ounces silver and are a reduction from the second quarter 2018 primarily due to mining depletion, but also due to removal of material because of thinner vein interpretations. Additional reserve reductions were made as a result of recent identification of fault offsets in the West Gloria area; this material may come back into the reserve once the structural geology and offset magnitudes are interpreted and drill tested. Measured and indicated resources are 181,900 ounces of gold and 770,200 ounces of silver and inferred resources are 222,700 ounces of gold and 1.7 million ounces of silver.

A breakdown of the Company's reserves and resources is set out in Table A at the end of this news release.

### EXPLORATION

Exploration (including corporate development) expenses were \$8.3 million, and \$35.9 million for the fourth quarter and full year 2018, respectively. This represents an increase of 41% and 53% over the fourth quarter and full year 2017. These increases were primarily the result of the addition of exploration near the Nevada Operations, increased exploration at San Sebastian, Casa Berardi and Greens Creek and initial exploration at the Kinskuch project in British Columbia and the Little Baldy project in northern Idaho.

#### Greens Creek – Alaska

At Greens Creek, drilling in the fourth quarter and strong assay results have upgraded and expanded the Deep 200 South, East Ore, Upper Plate and Southwest Bench zone resources. Exploration drilling focused on the Deep 200 South Zone and Lower Southwest Zone (Figure 5). Drilling of the Deep 200 South Zone confirmed three flat-lying, high-grade lenses that are folded to the west and has enabled portions of bench mineralization to be upgraded to an indicated resource category. Recent intersections include 180.4 oz/ton silver, 0.36 oz/ton gold, 14.0% zinc and 7.2% lead over 5.3 feet and 81.5 oz/ton silver, 0.40 oz/ton gold, 1.1% zinc and 0.6 lead over 5.0 feet. Near the mine portal elevation, drilling of the Upper Plate Zone to the northwest has defined at least two flat-lying zones that are folded to the east (Figure 6). In combination with surface drilling earlier in the year, this resource expanded further to the west and north. Definition drilling results indicate a thickening of the upper and middle mineralization horizons toward the Southwest D Fault from the east. Recent results include 11.4 oz/ton silver, 1.04 oz/ton gold, 2.2% zinc and 1.6% lead over 14.2 feet and 34.2 oz/ton silver, 0.01 oz/ton gold, 2.5% zinc and 1.5% lead over 4.9 feet.

In the East Ore Zone, intersections from drilling at the north end, including 38.5 oz/ton silver, 0.11 oz/ton gold, 7.4% zinc and 3.5% lead over 6.1 feet and 29.5 oz/ton silver, 0.11 oz/ton gold, 3.6% zinc and 1.3% lead over 8.4 feet, confirm previously modeled resource estimates, particularly at lower and higher elevations. Drilling has expanded this northern portion of the zone deeper by over 150 feet. The focus of the first quarter in 2019 underground drilling is on the Lower Southwest, Deep 200 South, 9A, and East Ore

zones. Later in 2019 additional drilling targeting of the Northwest West and Upper Plate zones is planned.

More complete drill assay highlights from Greens Creek can be found in Table B at the end of this release and a presentation showing drill intersection locations is available at the following:  
<http://ir.hecla-mining.com/interactive/newlookandfeel/4130678/Hecla-Q4-2018-ExplorationUpdate.pdf>.

#### Casa Berardi & Quebec

During the fourth quarter, up to six underground drills were used to refine stope designs, expand reserves and resources in the 118, 121, 123, 124, 125, and 128 zones and confirm further potential at depth and to the east and west (Figure 7). Up to four drills on surface completed in-fill and exploration drilling at the West Mine Crown Pillar (WMCP), the 128-129 zones east of the Principal pit and near the proposed 160 pit (Figure 7). The WMCP pit represents the latest in a series of existing and proposed open pits (Figure 8) along the Casa Berardi Fault or Deformation Zone. The cross section in Figure 9 shows where underground resources were brought into the WMCP pit.

At the Lower 118 Zone, drilling confirmed the continuity of multiple mineralized lenses to the west and at depth outside the current resource boundary. Recent intersections continue to expand this resource, including 0.63 oz/ton gold over 13.1 feet and 2.69 oz/ton gold over 2.6 feet. This drilling suggests the zone is open at depth below the 1200-level and to the west. Near the top of the 123 Zone (Figure 10), step-out drilling to the east show the continuity of high-grade mineralization down plunge for 400 feet from surface. Drilling from the 710-790 levels have extended gold mineralization at depth and further to the west with intersections of 0.39 oz/ton gold over 10.8 feet and 0.35 oz/ton gold over 8.9 feet. Drilling from the 970 level, at the bottom of the mine, confirmed multiple lenses and suggests these mineralized lenses plunge east at depth and remain open for exploration.

High in the mine, drilling has targeted the east extension of the 124 Zone that is down-plunge of the Principal pit mineralization. Drilling below the 290-level continues to show the down-dip potential of the 124 lenses to depth. Further east, drilling of the 128-129 zones is defining a high-grade, steeply-plunging series of lenses that have been defined vertically for 600 feet and may extend below the 290 level. Recent drill intersections include 0.35 oz/ton gold over 10.2 feet and 1.25 oz/ton gold over 1.6 feet.

Definition drilling has commenced at the 300-level of the East Mine to refine the depth extensions of the 160 Zone below the pit shells (Figure 11). Drilling has defined broad intervals of mineralization including 0.21 oz/ton gold over 20.3 feet and 0.16 oz/ton gold over 19.9 feet. This mineralization is steeply plunging to the west and is open to depth. Drilling of the WMCP to evaluate open pit potential west of the West Shaft has upgraded the current inferred resource to reserves that are part of a newly defined open pit reserve. The recent results below show that the near-surface, mineralized structures extends both beyond the western extent of the WMCP pit.

In the first quarter of 2019, underground drilling is expected to expand and refine the 118 and 123 zones lower in the mine and the 124-128 zones closer to surface. Underground exploration drilling is planned to evaluate the lower extension of the 113 Zone and the 128 Zone. Surface drilling programs are planned at the western extension of the WMCP and the 128-129 zones to define and expand underground mining potential east of the Principal area along the Casa Berardi Fault.

More complete drill assay highlights from Casa Berardi can be found in Table B at the end of the release and a presentation showing drill intersection locations is available at the following:  
<http://ir.hecla-mining.com/interactive/newlookandfeel/4130678/Hecla-Q4-2018-ExplorationUpdate.pdf>.

#### San Sebastian - Mexico

During the quarter, three core drill rigs and one reverse circulation (RC) drill operated at San Sebastian. One underground drill rig completed in-fill drilling in the central and upper portions of the oxide zone along the Middle Vein. Exploration drilling with two core rigs was directed toward shallower oxide mineralization along the West Francine, Esperanza veins and the recently discovered El Toro (South) Vein (Figure 12). At the Middle Vein, in-fill drilling within the oxide zone intercepted vein intervals with similar grade and width to the previous exploration drilling results in this area. Strong drill results include 66.9 oz/ton silver and 0.22 oz/ton

gold over 5.8 feet, and 42.4 oz/ton silver and 0.11 oz/ton gold over 4.7 feet. At the West Francine Vein, located about 1,000 feet west of any past drilling on the Francine Vein (Figure 12) core drilling has extended this mineralization about 400 feet along strike and a recent drill hole at the eastern end returned 9.5 oz/ton silver 0.02 oz/ton gold over 1.4 feet. Mineralization in this area is open laterally and at depth and follow-up, offset drilling is in progress.

The El Toro (South) Vein is located approximately halfway between the Andrea Vein resource area to the southeast and the Esperanza Vein to the northwest (Figure 12). Based on its location and orientation, this vein may represent the link between these two known veins with a total prospective strike length of over eight miles. Recent core drilling includes intersections of 9.8 oz/ton silver and 0.13 oz/ton gold over 11.8 feet, 4.1 oz/ton silver and 0.13 oz/ton gold over 10.0 feet, and 6.0 oz/ton silver and 0.04 oz/ton gold over 5.4 feet (Figure 13). Exploration drilling continues at the Esperanza Vein area, about a mile and a half west of the mine area. This drilling has defined a wide vein up to 30 feet wide but initial assay results have been poor. Drilling has shifted to the northwest where there are strong geochemistry anomalies along the trend of the vein.

Drilling will continue during the first quarter to evaluate near-surface oxide mineralization at the West Francine Vein, El Toro (South) and Esperanza Vein areas. A grid pattern of vertical holes for sampling overburden and bedrock using an RC drill rig has begun to better define the geochemistry along the Esperanza to Andrea vein corridor (Figure 14).

More complete drill assay highlights from San Sebastian can be found in Table B at the end of this release and a presentation showing drill intersection locations is available at the following:  
<http://ir.hecla-mining.com/interactive/newlookandfeel/4130678/Hecla-Q4-2018-ExplorationUpdate.pdf>.

## Nevada

### Fire Creek

There were up to four drill rigs operating underground at Fire Creek in the fourth quarter with definition drilling focusing on upper and lower portions of Spiral 4, upper portions of Spiral 3, and up-dip of Spiral 2 mineralization (Figure 15). One drill rig is evaluating the upper portions of Spiral 3 along the Honey Runner, Karen, Hui Wu and Joyce structures and will attempt to extend mineralization along strike to the Spiral 2 sills. A narrow, high-grade intercept of 2.79 oz/ton gold over 0.7 feet is within a larger, lower-grade envelope of 0.76 oz/ton gold over 5.0 feet. Other high-grade intercepts in Spiral 3 include 0.64 oz/ton gold over 7.8 feet and 4.08 oz/ton gold over 2.0 feet (Figure 16).

Two drills are evaluating the upper and lower portions of Spiral 4. The drill targeting the southern up-dip extents of the Vonnie, Vein 6, Joyce, and Vein 8 has defined multiple narrow, gold-bearing structures that persist into the upper extents of the Spiral 4 area. Recent intersections include 0.22 oz/ton gold over 10.0 feet and 0.20 oz/ton gold over 3.3 feet. The sill drill completed additional definition drilling in Spiral 2 on the Joyce Vein and Vein 39 that expanded mineralization up-dip. The 2019 underground drill program at Fire Creek is designed to upgrade and expand resources at Spirals 2, 3, 4 and 9 and the Titan and North zones (Figure 17).

Surface exploration rigs evaluated the Zeus (Figure 18) and Far View targets for high-grade, gold-bearing structures. Intercepts along strike of the Zeus target encountered multiple structures with strong argillic clay alteration that had intercepts of 0.21 oz/ton gold over 2.0 feet and 0.18 oz/ton gold over 2.3 feet. Drilling identified a new structure to the southwest that graded 0.18 oz/ton gold over 3.4 feet. A new vein, grading 0.17 oz/ton gold over 4.5 feet was also identified to the northeast on a new structure between Zeus and the Spiral 10 veins.

### Hollister

Up to three rigs were active in the West Gloria, East Clementine and Gwenivere areas during the fourth quarter. The West Gloria drilling program from the end of the 5265 Level targeted the extension of the Gloria veins to the west where previous drilling had identified veins (Figure 19). Drill results along the West Gloria structure below the level define numerous high-grade veins including 0.32 oz/ton gold and 6.1 oz/ton silver

over 11.6 feet and 0.25 oz/ton gold and 10.2 oz/ton silver over 5.5 feet. Additional in-fill drilling is required to determine the continuity of these higher-grade veins. The East Clementine program (Figures 19 and 20) targeted up-dip extensions of the 233 and 243 veins to follow up on high-grade intersections near the unconformity. Three intercepts, including 1.78 oz/ton gold and 7.5 oz/ton silver over 1.7 feet, on the 233 Vein have delineated a mineable resource close to current workings on the 5190 level. Another intercept, 0.60 oz/ton gold and 0.10 oz/ton silver over 5.0 feet, extended mineralization about 150 feet to the east on the 243 Vein, close to the unconformity (Figure 21).

The Gwenivere program (Figure 19) was designed to offset two historical surface reverse circulation (RC) intercepts. Initial drilling intersecting multiple structures had a significant assay interval of 1.35 oz/ton gold and 0.29 oz/ton silver over 3.5 feet. One hole was collared in Muck Bay 2 on the 5050 level and directed to the southeast. This hole intersected multiple dykes and transducers were installed to monitor the hydrology. Additional underground drilling in the Central Hollister, Gwenivere and West Gloria areas is planned to continue through the first quarter of 2019.

More complete drill assay highlights from Nevada (Fire Creek and Hollister) can be found in Table B at the end of this release and a presentation showing drill intersection locations is available at the following: <http://ir.hecla-mining.com/interactive/newlookandfeel/4130678/Hecla-Q4-2018-ExplorationUpdate.pdf>.

## ABOUT HECLA

Founded in 1891, [Hecla Mining Company](#) (NYSE:HL) is a leading low-cost U.S. silver producer with operating mines in Alaska, Idaho and Mexico, and is a growing gold producer with operating mines in Quebec, Canada and Nevada. The Company also has exploration and pre-development properties in eight world-class silver and gold mining districts in the U.S., Canada, and Mexico.

## Cautionary Statements Regarding Forward Looking Statements

Statements made or information provided in this news release that are not historical facts are "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995 and "forward-looking information" within the meaning of Canadian securities laws. Words such as "may", "will", "should", "expects", "intends", "projects", "believes", "estimates", "targets", "anticipates" and similar expressions are used to identify these forward-looking statements. The material factors or assumptions used to develop such forward-looking statements or forward-looking information include that the Company's plans for development and production will proceed as expected and will not require revision as a result of risks or uncertainties, whether known, unknown or unanticipated, to which the Company's operations are subject.

Forward-looking statements involve a number of risks and uncertainties that could cause actual results to differ materially from those projected, anticipated, expected or implied. These risks and uncertainties include, but are not limited to, metals price volatility, volatility of metals production and costs, litigation, regulatory and environmental risks, operating risks, project development risks, political risks, labor issues, ability to raise financing and exploration risks and results. Refer to the Company's Form 10K and 10-Q reports for a more detailed discussion of risk factors that may impact expected future results. The Company undertakes no obligation and has no intention of updating forward-looking statements other than as may be required by law.

## Cautionary Statements to Investors on Reserves and Resources

Reporting requirements in the United States for disclosure of mineral properties are governed by the SEC and included in the SEC's Securities Act Industry Guide 7, entitled "Description of Property by Issuers Engaged or to be Engaged in Significant Mining Operations" (Guide 7). Although the SEC has recently issued new rules rescinding Guide 7, the new rules are not binding until January 1, 2022, and at this time the Company still reports in accordance with Guide 7. However, the Company is also a "reporting issuer" under Canadian securities laws, which require estimates of mineral resources and reserves to be prepared in accordance with Canadian National Instrument 43-101 (NI 43-101). NI 43-101 requires all disclosure of estimates of potential mineral resources and reserves to be disclosed in accordance with its requirements. Such Canadian information is included herein to satisfy the Company's "public disclosure" obligations under Regulation FD of the SEC and to provide U.S. holders with ready

access to information publicly available in Canada.

Reporting requirements in the United States for disclosure of mineral properties under Guide 7 and the requirements in Canada under NI 43-101 standards are substantially different. This document contains a summary of certain estimates of the Company, not only of proven and probable reserves within the meaning of Guide 7, but also of mineral resource and mineral reserve estimates estimated in accordance with the definitional standards of the Canadian Institute of Mining, Metallurgy and Petroleum referred to in NI 43-101. Under Guide 7, the term "reserve" means that part of a mineral deposit that can be economically and legally extracted or produced at the time of the reserve determination. The term "economically", as used in the definition of reserve, means that profitable extraction or production has been established or analytically demonstrated to be viable and justifiable under reasonable investment and market assumptions. The term "legally", as used in the definition of reserve, does not imply that all permits needed for mining and processing have been obtained or that other legal issues have been completely resolved. However, for a reserve to exist, Hecla must have a justifiable expectation, based on applicable laws and regulations, that issuance of permits or resolution of legal issues necessary for mining and processing at a particular deposit will be accomplished in the ordinary course and in a timeframe consistent with Hecla's current mine plans. The terms "measured resources", "indicated resources" and "inferred resources" are Canadian mining terms as defined in accordance with NI 43-101. These terms are not defined under Guide 7 and are not normally permitted to be used in reports and registration statements filed with the SEC in the United States, except where required to be disclosed by foreign law. The term "resource" does not equate to the term "reserve". Under Guide 7, the material described herein as "indicated resources" and "measured resources" would be characterized as "mineralized material" and is permitted to be disclosed in tonnage and grade only, not ounces. The category of "inferred resources" is not recognized by Guide 7. Investors are cautioned not to assume that any part or all of the mineral deposits in such categories will ever be converted into proven or probable reserves. "Resources" have a great amount of uncertainty as to their existence, and great uncertainty as to their economic and legal feasibility. It cannot be assumed that all or any part of such a "resource" will ever be upgraded to a higher category or will ever be economically extracted. Investors are cautioned not to assume that all or any part of a "resource" exists or is economically or legally mineable. Investors are also especially cautioned that the mere fact that such resources may be referred to in ounces of silver and/or gold, rather than in tons of mineralization and grades of silver and/or gold estimated per ton, is not an indication that such material will ever result in mined ore which is processed into commercial silver or gold.

#### Qualified Person (QP) Pursuant to Canadian National Instrument 43-101

Dean McDonald, PhD. P.Geo., Senior Vice President - Exploration of Hecla Mining Company, who serves as a Qualified Person under National Instrument 43-101, supervised the preparation of the scientific and technical information concerning Hecla's mineral projects in this news release, including with respect to the newly acquired Nevada projects. Information regarding data verification, surveys and investigations, quality assurance program and quality control measures and a summary of sample, analytical or testing procedures for the Greens Creek Mine are contained in a technical report prepared for Hecla titled "Technical Report for the Greens Creek Mine, Juneau, Alaska, USA" effective date March 28, 2013, and for the Lucky Friday Mine are contained in a technical report prepared for Hecla titled "Technical Report on the Lucky Friday Mine Shoshone County, Idaho, USA" effective date April 2, 2014, for the Casa Berardi Mine are contained in a technical report prepared for Hecla titled "Technical Report on the Mineral Resource and Mineral Reserve Estimate for the Casa Berardi Mine, Northwestern Quebec, Canada" effective date March 31, 2014 (the "Casa Berardi Technical Report"), and for the San Sebastian Mine are contained in a technical report prepared for Hecla titled "Technical Report for the San Sebastian Ag-Au Property, Durango, Mexico" effective date September 8, 2015. Also included in these four technical reports is a description of the key assumptions, parameters and methods used to estimate mineral reserves and resources and a general discussion of the extent to which the estimates may be affected by any known environmental, permitting, legal, title, taxation, socio-political, marketing or other relevant factors. Information regarding data verification, surveys and investigations, quality assurance program and quality control measures and a summary of sample, analytical or testing procedures for the Fire Creek Mine are contained in a technical report prepared for Klondex Mines titled "Technical Report for the Fire Creek Project, Lander County, Nevada, dated March 31, 2018; the Hollister Mine dated May 31, 2017, amended August 9, 2017; and the Midas Mine dated August 31, 2014, amended April 2, 2015. Copies of these technical reports are available under Hecla's and Klondex's profiles on SEDAR at [www.sedar.com](http://www.sedar.com).

Dr. McDonald reviewed and verified information regarding drill sampling, data verification of all digitally-collected data, drill surveys and specific gravity determinations relating to the Casa Berardi mine.



The review encompassed quality assurance programs and quality control measures including analytical or testing practice, chain-of-custody procedures, sample storage procedures and included independent sample collection and analysis. This review found the information and procedures meet industry standards and are adequate for Mineral Resource and Mineral Reserve estimation and mine planning purposes.

Table A: Reserves and Resources &ndash; 12/31/18<sup>(1)</sup>

Proven Reserves

Asset	Tons (000)	Silver (oz/ton)	Gold (oz/ton)	Lead %	Zinc %	Copper %	Silver (000 oz)	Gold (000 oz)	Lead Tons	Zinc Tons	Copper Tons
Greens Creek <sup>(2)</sup>	6	13.8	0.10	2.8	7.0	-	86	1	180	440	-
Lucky Friday <sup>(2)</sup>	4,230	15.4	-	9.6	4.1	-	65,234	-	406,080	174,630	-
Casa Berardi <sup>(3)</sup>	6,790	-	0.08	-	-	-	-	563	-	-	-
San Sebastian <sup>(2)</sup>	22	3.9	0.08	-	-	-	85	2	-	-	-
Fire Creek <sup>(2,4)</sup>	24	1.1	1.21	-	-	-	27	29	-	-	-
Hollister <sup>(2,5)</sup>	2	7.0	0.73	-	-	-	17	2	-	-	-
Total	11,074						65,448	596	406,260	175,070	-

Probable Reserves

Asset	Tons (000)	Silver (oz/ton)	Gold (oz/ton)	Lead %	Zinc %	Copper %	Silver (000 oz)	Gold (000 oz)	Lead (Tons)	Zinc (Tons)	Copper (Tons)
Greens Creek <sup>(2)</sup>	9,270	11.5	0.09	2.8	7.6	-	106,972	840	262,760	706,040	-
Lucky Friday <sup>(2)</sup>	1,387	11.4	-	7.6	3.7	-	15,815	-	104,720	50,640	-
Casa Berardi <sup>(3)</sup>	16,954	-	0.08	-	-	-	-	1,343	-	-	-
San Sebastian <sup>(2)</sup>	206	13.1	0.10	-	-	-	2,705	21	-	-	-
Fire Creek <sup>(2,4)</sup>	91	0.3	0.44	-	-	-	30	40	-	-	-
Hollister <sup>(2,5)</sup>	9	7.2	0.65	-	-	-	66	6	-	-	-
Total	27,917						125,588	2,250	367,480	756,680	-

Proven and Probable Reserves

Asset	Tons (000)	Silver (oz/ton)	Gold (oz/ton)	Lead %	Zinc %	Copper %	Silver (000 oz)	Gold (000 oz)	Lead (Tons)	Zinc (Tons)	Copper (Tons)
Greens Creek <sup>(2)</sup>	9,277	11.5	0.09	2.8	7.6	-	107,058	840	262,940	706,470	-
Lucky Friday <sup>(2)</sup>	5,617	14.4	-	9.1	4.0	-	81,049	-	510,800	225,260	-
Casa Berardi <sup>(3)</sup>	23,743	-	0.08	-	-	-	-	1,907	-	-	-
San Sebastian <sup>(2)</sup>	228	12.3	0.10	-	-	-	2,790	23	-	-	-
Fire Creek <sup>(2,4)</sup>	115	0.5	0.60	-	-	-	57	69	-	-	-
Hollister <sup>(2,5)</sup>	11	7.2	0.67	-	-	-	82	8	-	-	-
Total	38,991						191,036	2,846	773,740	931,730	-

(1) The term "reserve" means that part of a mineral deposit that can be economically and legally extracted or produced at the time of the reserve determination. The term "economically," as used in the definition of reserve, means that profitable extraction or production has been established or analytically demonstrated to be viable and justifiable under reasonable investment and market assumptions. The term "legally," as used in the definition of reserve, does not imply that all permits needed for mining and processing have been obtained or that other legal issues have been completely resolved. However, for a reserve to exist, Hecla must have a justifiable expectation, based on applicable laws and regulations, that issuance of permits or resolution of legal issues necessary for mining and processing a particular deposit will be accomplished in the ordinary course and in a timeframe consistent with Hecla's current mine plans.

(2) Mineral reserves are based on \$1200 gold, \$14.50 silver, \$0.90 lead, \$1.15 zinc, unless otherwise stated.

(3) Mineral reserves are based on \$1200 gold and a US\$/CAN\$ exchange rate of 1:1.33 Reserve diluted to an average grade of 34.7% to minimum width of 9.8 feet (3 m)

Reserves at Casa Berardi were determined by Jonathan Archambault-Giroux, P. Geo., Que., Real Parent, P. Geo. Que. and Alain Quenneville, P. Eng., Que. unless otherwise stated.

Open pit mineral reserves of the Principal Mine were estimated in September 2018 by Hecla Quebec and Mine Development Associates based on \$1225 gold and a US\$/CAN\$ exchange rate of 1:3.

[Hecla Mining Company](#), Principal Deposit Open Pit Mining Study - 2018

September 1, 2018, by Mine Development Associates, Thomas L. Dyer, P.E.

Open pit mineral reserves of the 160 and 134 Zones were estimated in January 2018 by Hecla Quebec and Mine Development Associates based on \$1225 gold and a US\$/CAN\$ exchange rate of 1.3.

Hecla Mining, Casa Berardi 160 and 134 Zones, Open Pit Mining Study - 2017

January 12, 2018, by Mine Development Associates, Thomas L. Dyer, P.E.

Open pit mineral reserves of the West Mine Crown Pillar were estimated in January 2019 by Hecla Quebec and Mine Development Associates based on \$1225 gold and a US\$/CAN\$ exchange rate of 1.3.

[Hecla Mining Company](#), West Mine Crown Pillar Deposit, Open Pit Mining Study - 2018

January 10, 2019, by Mine Development Associates, Thomas L. Dyer, P.E.

Open pit mineral reserves of the East Mine Crown Pillar Expansion were estimated in August 2018 by Hecla Quebec and Mine Development Associates based on \$1225 gold and a US\$/CAN\$ exchange rate of 1.3.

[Hecla Mining Company](#), East Mine Crown Pillar Expansion, Open Pit Mining Study - 2018

August 22, 2018, by Mine Development Associates, Thomas L. Dyer, P.E.

(4) Recoveries at Fire Creek for gold and silver are 94% and 92%. Cutoff grade of 0.339 Au Equivalent oz/ton and incremental cutoff grade of 0.11 Au Equivalent oz/ton. Unplanned dilution of 10% to 17% included depending on mining method.

(5) Recoveries at Hollister for gold and silver are 87% and 80%. Cutoff grade of 0.396 Au Equivalent oz/ton and incremental cutoff grade of 0.07 Au Equivalent oz/ton. Unplanned dilution of 10% to 17% and 5% mining loss included.

#### Measured Resources

Asset	Tons (000)	Silver (oz/ton)	Gold (oz/ton)	Lead %	Zinc %	Copper %	Silver (000 oz)	Gold (000 oz)	Lead (Tons)	Zinc (Tons)	Copper Tons
Greens Creek <sup>(6)</sup>	339	9.5	0.11	2.6	9.4	-	3,233	36	8,800	31,700	-
Lucky Friday <sup>(6,7)</sup>	7,587	7.6	-	4.9	2.7	-	57,314	-	370,240	204,490	-
Casa Berardi <sup>(8)</sup>	1,952	-	0.15	-	-	-	-	299	-	-	-
San Sebastian <sup>(6,9)</sup>	-	-	-	-	-	-	-	-	-	-	-
Fire Creek <sup>(6,10)</sup>	64	0.7	0.92	-	-	-	47	58	-	-	-
Hollister <sup>(6,11)</sup>	104	4.0	0.92	-	-	-	420	96	-	-	-
Midas <sup>(6,12)</sup>	183	6.7	0.45	-	-	-	1,235	82	-	-	-
Heva <sup>(14)</sup>	5,480	-	0.06	-	-	-	-	304	-	-	-
Hosco <sup>(14)</sup>	33,070	-	0.04	-	-	-	-	1,296	-	-	-
Rio Grande Silver <sup>(15)</sup>	-	-	-	-	-	-	-	-	-	-	-
Star <sup>(16)</sup>	-	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>48,778</b>						<b>62,249</b>	<b>2,172</b>	<b>379,040</b>	<b>236,190</b>	<b>-</b>

#### Indicated Resources

Asset	Tons (000)	Silver (oz/ton)	Gold (oz/ton)	Lead %	Zinc %	Copper %	Silver (000 oz)	Gold (000 oz)	Lead (Tons)	Zinc (Tons)	Copper Tons
Greens Creek <sup>(6)</sup>	7,128	13.2	0.10	3.1	8.1	-	94,197	690	218,950	577,650	-
Lucky Friday <sup>(6,7)</sup>	2,498	8.0	-	5.2	2.5	-	20,049	-	128,830	61,480	-
Casa Berardi <sup>(8)</sup>	10,797	-	0.08	-	-	-	-	906	-	-	-
San Sebastian <sup>(6,9)</sup>	2,243	6.5	0.05	2.5	3.5	1.6	14,690	115	30,410	42,710	19,780
Fire Creek <sup>(6,10)</sup>	307	0.5	0.54	-	-	-	158	164	-	-	-
Fire Creek - Open Pit <sup>(13)</sup>	42,877	0.1	0.03	-	-	-	2,350	1,093	-	-	-
Hollister <sup>(6,11)</sup>	135	2.6	0.64	-	-	-	350	86	-	-	-
Midas <sup>(6,12)</sup>	722	4.5	0.37	-	-	-	3,228	267	-	-	-
Heva <sup>(14)</sup>	5,570	-	0.07	-	-	-	-	369	-	-	-
Hosco <sup>(14)</sup>	31,620	-	0.04	-	-	-	-	1,151	-	-	-
Rio Grande Silver <sup>(15)</sup>	516	14.8	-	2.1	1.1	-	7,620	-	10,760	5,820	-
Star <sup>(16)</sup>	1,126	2.9	-	6.2	7.4	-	3,301	-	69,900	83,410	-
<b>Total</b>	<b>105,538</b>						<b>145,944</b>	<b>4,841</b>	<b>458,850</b>	<b>771,070</b>	<b>19,780</b>

#### Measured & Indicated Resources

Asset	Tons (000)	Silver (oz/ton)	Gold (oz/ton)	Lead %	Zinc %	Copper %	Silver (000 oz)	Gold (000 oz)	Lead (Tons)	Zinc (Tons)	Copper Tons
Greens Creek <sup>(6)</sup>	7,467	13.0	0.10	3.1	8.2	-	97,430	726	227,740	609,350	-
Lucky Friday <sup>(6,7)</sup>	10,084	7.7	-	4.9	2.6	-	77,363	-	499,070	265,970	-
Casa Berardi <sup>(8)</sup>	12,749	-	0.09	-	-	-	-	1,205	-	-	-
San Sebastian <sup>(6,9)</sup>	2,243	6.5	0.05	2.5	3.5	1.6	14,690	115	30,410	42,710	19,780
Fire Creek <sup>(6,10)</sup>	371	0.6	0.60	-	-	-	205	222	-	-	-
Fire Creek - Open Pit <sup>(13)</sup>	42,877	0.1	0.03	-	-	-	2,350	1,093	-	-	-
Hollister <sup>(6,11)</sup>	239	3.2	0.76	-	-	-	770	182	-	-	-
Midas <sup>(6,12)</sup>	905	4.9	0.39	-	-	-	4,463	349	-	-	-
Heva <sup>(14)</sup>	11,050	-	0.06	-	-	-	-	672	-	-	-

Hosco <sup>(14)</sup>	64,690	-	0.04	-	-	-	-	2,447	-	-	-
Rio Grande Silver <sup>(15)</sup>	516	14.8	-	2.1	1.1	-	7,620	-	10,760	5,820	-
Star <sup>(16)</sup>	1,126	2.9	-	6.2	7.4	-	3,301	-	69,900	83,410	-
Total	154,316						208,193	7,012	837,880	1,007,260	19,780
Inferred Resources											
	Tons	Silver	Gold	Lead	Zinc	Copper	Silver	Gold	Lead	Zinc	Copper
Asset	(000)	(oz/ton)	(oz/ton)	%	%	%	(000 oz)	(000 oz)	(Tons)	(Tons)	Tons
Greens Creek <sup>(6)</sup>	2,470	14.6	0.09	3.0	7.3	-	35,982	219	74,410	181,400	-
Lucky Friday <sup>(6,7)</sup>	2,861	8.7	-	6.3	2.6	-	24,809	-	181,180	74,430	-
Casa Berardi <sup>(8)</sup>	6,222	-	0.10	-	-	-	-	652	-	-	-
San Sebastian <sup>(6,17)</sup>	3,487	6.6	0.04	1.7	2.5	1.3	22,948	143	12,110	17,440	8,890
Fire Creek <sup>(6,10)</sup>	565	0.5	0.53	-	-	-	288	299	-	-	-
Fire Creek - Open Pit <sup>(13)</sup>	31,707	0.1	0.03	-	-	-	2,882	1,085	-	-	-
Hollister <sup>(6,11,18)</sup>	550	3.1	0.40	-	-	-	1,716	223	-	-	-
Midas <sup>(6,12)</sup>	573	3.0	0.34	-	-	-	1,723	198	-	-	-
Heva <sup>(14)</sup>	4,210	-	0.08	-	-	-	-	350	-	-	-
Hosco <sup>(14)</sup>	7,650	-	0.04	-	-	-	-	314	-	-	-
Rio Grande Silver <sup>(19)</sup>	3,078	10.7	0.01	1.3	1.1	-	33,097	36	40,990	34,980	-
Star <sup>(16)</sup>	3,157	2.9	-	5.6	5.5	-	9,432	-	178,670	174,450	-
Monte Cristo <sup>(20)</sup>	913	0.3	0.14	-	-	-	271	131	-	-	-
Rock Creek <sup>(21)</sup>	100,086	1.5	-	-	-	0.7	148,736	-	-	-	658,680
Montanore <sup>(22)</sup>	112,185	1.6	-	-	-	0.7	183,346	-	-	-	759,420
Total	279,714						465,229	3,648	487,360	482,700	1,426,990

Note: All estimates are in-situ except for the proven reserves at Greens Creek and San Sebastian which are in surface stockpiles. Resources are exclusive of reserves.

(6) Mineral resources are based on \$1350 gold, \$21 silver, \$1.10 lead, \$1.20 zinc and \$3.00 copper, unless otherwise stated.

(7) Measured and indicated resources from Gold Hunter and Lucky Friday vein systems are diluted and factored for expected mining recovery.

(8) Measured, indicated and inferred resources are based on \$1,350 gold and a US\$/CAN\$ exchange rate of 1:1.33. Underground resources are reported at a minimum mining width of 6.6 to 9.8 feet (2 m to 3 m).

Resources at Casa Berardi were determined by Jonathan Archambault-Giroux, P. Geo., Que., Real Parent, P. Geo. Que., and Alain Quenneville, P. Eng., Que. unless otherwise stated.

(9) Indicated resources reported at a minimum mining width of 5.9 feet (1.8 m) for Hugh Zone, Middle Vein, North Vein, and East Francine Vein and 4.9 feet (1.5 m) for Andrea Vein.

San Sebastian lead, zinc and copper grades are for 1,224,900 tons of indicated resource within the Middle Vein and the Hugh Zone of the Francine Vein.

(10) Recoveries at Fire Creek for gold and silver are 94% and 92%. Au equivalent cutoff grade of 0.297 oz/ton. The minimum mining width is defined as four feet or the vein true thickness plus two feet, whichever is greater.

(11) Recoveries at Hollister for gold and silver are 87% and 80%. Au equivalent cutoff grade of 0.352 oz/ton. The minimum mining width is defined as four feet or the vein true thickness plus two feet, whichever is greater.

(12) Recoveries at Midas for gold and silver are 93% and 88%. Au equivalent cutoff grade of 0.217 oz/ton. The minimum mining width is defined as four feet or the vein true thickness plus two feet, whichever is greater.

(13) Indicated and inferred open-pit resources for Fire Creek were calculated November 30, 2017 using recoveries for gold and silver of 65% and 30% for oxide material and 60% and 25% for mixed oxide-sulfide material.

Open pit resources are calculated at \$1400 gold and \$19.83 silver and cut-off grade of 0.01 Au Equivalent oz/ton and is inclusive of 10% mining dilution and 5% ore loss. Open pit mineral resources exclusive of underground mineral resources.

NI43-101 Technical Report for the Fire Creek Project, Lander County, Nevada; Effective Date March 31, 2018; prepared by Practical Mining LLC, Mark Odell, P.E. for [Hecla Mining Company](#), June 28, 2018.

(14) Measured, indicated and inferred resources were estimated in by Goldminds Geoservices Inc. with effective date 12-July-2013, and are based on \$1,300 gold and a US\$/CAN\$ exchange rate of 1:1.

The resources are in-situ without dilution and material loss.

NI43-101 Technical Report, Mineral Resource Update, Heva-Hosco Gold Projects, Rouyn-Noranda, Quebec, Hecla Quebec, December 2013.

Prepared by: Claude Duplessis, Eng. Project Manager - GoldMinds Geoservices Inc.; Maxime Dup  r  , P. Geo - SGS Canada Inc. (Geostat).

- (15) Indicated resources reported at a minimum mining width of 6.0 feet for Bulldog; resources based on \$26.5 Ag, \$0.85 Pb, and \$0.85 Zn
- (16) Indicated and Inferred resources reported using \$21 silver, \$0.95 lead, \$1.10 lead minimum mining width of 4.3 feet.
- (17) Inferred resources reported at a minimum mining width of 5.9 feet (1.8 m) for Hugh Zone, Middle Vein, North Vein, and East Francine Vein and 4.9 feet (1.5 m) for Andrea Vein  
San Sebastian lead, zinc and copper grades are for 702,600 tons of inferred resource within the Middle Vein and the Hugh Zone of the Francine Vein.
- (18) Inferred resources for the Hatter Project at the Hollister Mine calculated using recoveries for gold and silver of 82.7% and 71.8% and an Au equivalent cutoff grade of 0.27 oz/ton
- (19) Inferred resources reported at a minimum mining width of 6.0 feet for Bulldog, 5.0 feet for Equity & North Amethyst veins; resources based on \$1400 Au, \$26.5 Ag, \$0.85 Pb, and \$0.85 Zn.
- (20) Inferred resource reported at a minimum mining width of 5.0 feet; resources based on \$1400 Au, \$26.5 Ag.
- (21) Inferred resource at Rock Creek reported at a minimum thickness of 15 feet and adjusted given mining restrictions as defined by U.S. Forest Service, Kootenai National Forest in the June 2003 'Record of Decision, Rock Creek Project'.
- (22) Inferred resource at Montanore reported at a minimum thickness of 15 feet and adjusted given mining restrictions defined by U.S. Forest Service, Kootenai National Forest, Montana DEQ in December 2015 'Joint Final EIS, Montanore Project' and the February 2016 U.S Forest Service - Kootenai National Forest 'Record of Decision, Montanore Project'.

Table B – Assay Results – Q4 2018  
Greens Creek (Alaska)

Zone	Drill Hole Number	Drillhole Azm/Dip	Sample From	Sample To	True Width (feet)	Silver (oz/ton)	Gold (oz/ton)
Deep 200 South	GC5004	243/-72	189.5	198.4	8.8	10.7	0.02
	GC5004	243/-72	219.0	237.0	17.8	43.8	0.03
	GC5004	243/-72	260.0	276.0	15.4	58.1	0.01
	GC5004	243/-72	340.0	341.5	1.4	12.1	0.17
	GC5004	243/-72	440.0	441.0	0.8	30.7	0.02
	GC5004	243/-72	663.5	665.0	1.4	22.3	0.05
	GC5007	243/-86	206.5	212.7	5.7	19.2	0.05
	GC5007	243/-86	225.0	229.0	4.0	14.7	0.01
	GC5007	243/-86	371.8	373.3	1.3	18.9	0.02
	GC5013	263/-65	195.7	198.0	2.2	26.8	0.02
	GC5013	263/-65	200.5	207.0	6.3	50.8	0.04
	GC5013	263/-65	211.7	213.7	2.0	12.1	0.01
	GC5013	263/-65	257.0	260.0	2.8	72.0	0.02
	GC5018	243/-55	281.0	283.5	1.9	21.7	0.01
	GC5018	243/-55	606.5	610.5	4.0	20.3	0.20
	GC5022	243/-47	415.0	416.0	0.8	68.6	0.26
	GC5022	243/-47	449.5	455.0	5.3	180.4	0.36
	GC5030	63/-74	598.5	601.0	1.6	13.6	0.04
	GC5030	63/-74	657.0	664.0	6.9	18.2	0.08
	GC5044	243/-73	179.0	190.5	11.0	24.0	0.01
	GC5044	273/-73	235.0	238.0	3.0	16.7	0.03
	GC5044	273/-74	671.5	695.7	24.0	28.8	0.11
	GC5044	243/-74	720.0	725.0	4.5	16.0	0.26
	GC5047	243/-63	193.5	208.0	12.7	24.8	0.00
	GC5047	243/-63	222.5	235.0	12.3	31.2	0.01
	GC5047	243/-63	366.0	394.0	22.5	64.4	0.02
	GC5059	63/-87	479.0	482.0	3.0	18.7	0.04
	GC5073	243/-83	479.6	484.6	5.0	81.5	0.40
	GC5073	243/-83	663.0	678.0	14.9	14.6	0.10
	GC5076	243/-73	522.0	524.5	2.1	17.5	0.03
	GC5076	243/-73	684.0	715.0	29.9	44.6	0.18
	GC5079	243/-62	210.0	218.0	7.8	36.1	0.02

Upper Plate	GC5079	243/-62	231.0	233.5	1.5	15.3	0.05
	GC5079	243/-62	271.5	286.5	13.1	13.4	0.04
	GC5079	243/-62	294.0	298.4	4.4	13.3	0.01
	GC5079	243/-63	317.5	319.5	1.7	22.0	0.01
	GC5083	243/-53	583.0	588.0	3.8	16.2	0.02
	GC5048	241/26	611.5	616.0	1.5	14.8	0.09
	GC5054	239/37	263.5	267.4	2.7	19.1	0.01
	GC5054	239/37	363.5	365.0	1.1	18.0	0.02
	GC5054	239/37	389.5	390.5	0.8	15.2	0.01
	GC5057	235/56	199.0	204.0	4.9	34.2	0.01
	GC5057	235/56	321.6	322.7	0.9	18.0	0.02
	GC5060	230/70	195.0	202.5	7.4	39.8	0.01
	GC5060	230/70	284.5	293.5	8.6	13.6	0.01
	GC5062	222/51	199.9	204.3	3.7	20.5	0.00
	GC5062	222/51	316.0	328.0	11.4	21.4	0.05
	GC5066	91/78	204.0	208.0	4.0	12.1	0.02
	GC5066	91/78	240.5	243.5	3.0	13.5	0.02
	GC5088	252/60	153.0	171.5	14.2	11.4	1.04
	GC5088	252/60	290.5	297.0	6.0	18.9	0.02
	GC5093	248/41	238.0	243.0	2.4	23.2	0.01
East Ore	GC5093	248/41	364.0	368.0	2.9	24.5	0.02
	GC5093	248/41	381.0	382.0	0.8	16.1	0.01
	GC5095	247/35	243.5	244.5	0.6	35.5	0.03
	GC5099	246/28	286.5	290.0	1.9	29.5	0.13
	GC5009	59/-6	350.5	353.5	2.4	29.2	0.22
	GC5012	56/-41	268.0	269.0	1.0	18.7	0.10
	GC5012	56/-41	289.0	294.5	5.3	24.1	0.42
	GC5017	68/3	370.0	371.8	1.5	11.1	0.29
	GC5024	243/-47	306.0	310.0	4.0	41.4	0.09
	GC5027	71/-49	303.5	305.0	1.5	19.6	0.08
	GC5028	81/-71	314.5	315.5	1.0	12.5	0.05
	GC5029	76/-1	368.5	369.5	0.8	13.9	0.12
	GC5032	91/-31	331.0	332.0	0.9	77.8	0.30
	GC5034	82/0	396.2	400.0	3.7	99.7	0.28
	GC5035	82/-14	368.0	374.7	6.6	11.1	0.18
	GC5053	46/-1	353.0	356.3	3.0	22.0	0.16
	GC5056	46/-10	343.0	344.3	1.3	15.2	0.16
	GC5058	39/13	400.0	407.0	6.1	38.5	0.11
	GC5061	39/4	366.2	369.2	2.6	26.0	0.14
	GC5072	79/11	418.0	422.5	4.1	13.4	0.41
	GC5074	35/14	403.0	412.0	8.0	20.6	0.08
	GC5075	51/17	410.4	418.0	6.4	11.3	0.36
	GC5084	48/20	443.0	449.3	5.6	30.1	0.20
	GC5089	36/-6	354.0	355.0	1.0	37.3	0.28
	GC5090	36/-6	367.5	372.0	4.3	28.7	0.22
	GC5094	247/35	308.0	313.0	4.8	28.6	0.26
	GC5096	51/-31	296.0	304.5	8.4	29.5	0.11
	GC5100	27/-26	280.5	285.5	4.6	18.2	0.32

Casa Berardi (Quebec)

Zone	Drill Hole Number	Drill Hole Section	Drill Hole Azm/Dip	Sample From	Sample To	True V
Lower 123 - 710-790 Area	CBP-0750-017	12107	270/16	108.0	111.0	8.5
123	CBP-0750-017	12099	270/16	115.5	118.5	8.5
123	CBP-0750-017	12094	270/16	120.8	124.6	10.8
123	CBP-0750-018	12180	260/-18	35.7	36.0	0.8

123	CBP-0750-018	12129	260/-18	90.0	90.7	1.8
123	CBP-0750-020	12139	246/-15	81.0	87.0	8.9
Lower 123 - 970-1010 Area	CBP-0970-037	12500	182/21	171.5	174.5	7.1
123	CBP-0970-038	12511	183/9	203.0	204.6	3.7
123	CBP-0970-041	12532	179/-6	226.8	228.4	3.3
123	CBP-0970-043	12463	172/43	152.6	160.9	22.5
Upper Principal 124	CBP-0766	12785	180/-19	70.8	73.5	8.5
East Mine 160 - 210-270 Area	CBE-0122	15892	22/27	231.0	235.6	7.9
160	CBE-0122	15896	22/27	243.2	245.0	2.7
160	CBE-0122	15901	22/27	254.2	258.5	6.6
160	CBE-0122	15907	22/27	267.0	271.5	6.8
160	CBE-0122	15923	22/27	308.0	311.4	8.5
160	CBE-0123	15856	22/19	209.7	213.0	8.1
160	CBE-0123	15891	22/19	215.2	223.5	19.9
160	CBE-0124	15827	3/10	187.5	196.2	26.2
160	CBE-0124	15834	3/10	220.5	223.7	9.2
160	CBE-0124	15836	3/10	231.0	232.5	4.3
160	CBE-0124	15840	3/10	249.0	252.0	8.6
160	CBE-0124	15848	3/10	285.0	288.0	8.5
160	CBE-0125	15747	340/18	183.3	187.0	10.6
160	CBE-0125	15723	340/18	286.5	287.7	20.3
160	CBE-0127	15708	327/10	207.0	208.0	3.1
160	CBE-0127	15703	327/10	222.9	223.7	2.5
WMCP Pit	CBF-105-017	11149	180/-61	221.4	242.0	33.1
105-111	CBF-105-018	11052	360/-47	146.3	161.8	37.7
105-111	CBF-105-019	11055	180/-60	159.0	174.7	23.9
105-111	CBF-105-019	11056	180/-60	181.5	188.4	9.8
105-111	CBF-105-020	11054	180/-56	137.0	183.0	80.0
105-111	CBF-105-022	11159	180/-45	128.2	132.0	9.2
105-111	CBF-105-022	11158	180/-45	165.0	168.0	7.2
Lower 118	CBP-0757	11954	6/-60	247.7	254.0	13.1
118	CBP-0757	11954	6/-60	247.7	248.7	2.6
118	CBP-0757	11954	6/-60	248.7	249.7	2.6
118	CBP-0757	11957	6/-60	271.0	281.0	20.7
118	CBP-0757	11957	6/-60	271.0	272.0	2.6
Upper 124-128	CBP-0771	12848	180/-32	72.3	75.0	7.9
124-128	CBP-0771	12848	180/-32	90.0	93.0	8.5
124-128	CBP-0771	12810	180/-32	439.8	440.4	2.0
124-128	CBP-0771	12808	180/-32	449.1	450.8	4.9
Principal 128	CBS-18-882	12811	360/-55	418.5	421.5	7.5
128	CBS-18-883	12797	360/-56	552.8	557.5	10.2
128	CBS-18-883	12796	360/-56	552.8	553.5	1.6
128	CBS-18-884	12795	360/-52	511.6	513.6	5.6
128	CBS-18-884	12795	360/-52	511.6	512.6	2.6
128	CBS-18-885	12777	360/-55	653.7	657.0	6.2
128	CBS-18-885	12777	360/-55	653.7	654.3	1.3
128	CBS-18-885	12775	360/-55	684.7	686.2	3.9

San Sebastian (Mexico)

Zone	Drill Hole Number	Sample From (ft)	Sample To (ft)	Width (feet)	True Width (feet)	Gold (oz/ton)	Silver (oz/ton)
El Toro Vein	SS-1687	217.6	223.1	5.5	5.4	0.04	6.0
	SS-1693	275.2	285.8	10.5	10.0	0.13	4.1
	SS-1706	164.6	176.4	11.8	11.3	0.13	9.8
Middle Vein	SS-MV-101-002	131.6	138.8	7.2	5.8	0.22	66.0

	SS-MV-101-004	111.9	119.8	8.0	6.4	0.11	29.
	SS-MV-101-007	158.6	164.7	6.1	3.7	0.05	25.
	SS-MV-101-008	184.5	191.9	7.3	4.4	0.03	10.
	SS-MV-101-012	146.3	153.0	6.6	5.3	0.33	18.
	SS-MV-101-015	172.5	180.3	7.8	4.7	0.11	42.
	SS-MV-101-016	144.2	151.3	7.1	4.2	0.13	22.
	SS-MV-101-018	158.7	166.8	8.1	4.9	0.16	24.
West Francine Vein	SS-1669	874.0	876.0	2.0	1.4	0.02	9.5
Fire Creek (Nevada)							
Zone	Drill Hole Number	Drill Hole Azm/Dip	Sample From (feet)	Sample To (feet)	Width (feet)	True Width (feet)	Gold
Spiral 3	FCU-1010	110/18	15	18	3	2.7	0.19
	FCU-1010	110/18	76	79	3	2.7	0.13
	FCU-1010	110/18	300	306	6	5.3	0.10
	FCU-1010	110/18	334	339.5	5.5	5.0	0.76
	includes		334	338.5	4.5	3.1	0.30
	includes		338.5	339.5	1	0.7	2.79
	FCU-1010	110/18	348	357.5	9.5	6.6	0.19
	FCU-1011	103/25	8.1	11	2.9	2.7	0.41
	FCU-1011	103/25	16.5	21.5	5	4.6	0.19
	FCU-1011	103/25	197.9	199	1.1	Unknown	0.13
	FCU-1011	103/25	277	298	21	19.3	0.15
	FCU-1011	103/25	317.2	319.5	2.3	1.7	0.19
	FCU-1011	103/25	321.6	322.2	0.6	0.4	0.13
	FCU-1011	103/25	341.5	345.6	4.1	3.0	0.35
	FCU-1012	84/35	0	7.6	7.6	7.3	0.12
	FCU-1012	84/35	30.5	34	3.5	3.2	0.26
	FCU-1012	84/35	30.5	31	0.5	0.5	0.16
	FCU-1012	84/35	31	34	3	2.7	0.27
	FCU-1012	84/35	82	85	3	2.8	0.12
	FCU-1012	84/35	183	187	4	3.6	0.24
	FCU-1018	110/9	12.8	16	3.2	2.9	0.12
	FCU-1018	110/9	22	27	5	4.5	0.18
	FCU-1019	102/14	10	13	3	2.9	0.13
	FCU-1019	102/14	13.5	15.2	1.7	1.6	0.16
	FCU-1019	102/14	67	70.5	3.5	3.3	0.31
	FCU-1019	102/14	252	259.5	7.5	Unknown	0.20
	FCU-1019	102/14	292	295	3	2.9	0.35
	includes		292	293.5	1.5	1.4	0.11
	includes		293.5	295	1.5	1.4	0.59
	FCU-1019	102/14	335.5	337.8	2.3	1.8	0.20
	FCU-1019	102/14	352	352.6	0.6	0.5	0.10
	FCU-1019	102/14	353.2	354.4	1.2	0.9	0.12
	FCU-1026	93/25	20	21	1	Unknown	0.11
	FCU-1026	93/25	57	64.5	7.5	Unknown	0.16
	FCU-1030	110/9	13.6	20	6.4	Unknown	0.18
	FCU-1030	110/9	128.7	131	2.3	1.8	0.12
	FCU-1030	110/9	268.2	269	0.8	0.7	0.28
	FCU-1030	110/9	271.4	272	0.6	Unknown	0.11
	FCU-1030	110/9	307.5	309.8	2.3	Unknown	4.08
	includes		307.5	308.5	1	0.9	1.58
	includes		308.5	309.3	0.8	0.7	9.69
	FCU-1030	110/9	309.3	309.8	0.5	Unknown	0.12
	FCU-1030	110/9	325.5	329.5	4	2.8	0.16
	FCU-1030	110/9	336.2	337.5	1.3	0.9	0.11

	FCU-1030	110/9	366	377	11	7.8	0.64
	includes		366	370	4	2.8	1.10
	includes		370	373	3	2.1	0.19
	includes		373	377	4	2.8	0.52
Spiral 4	FCU-1006	105/-30	93	98	5	4.4	0.11
	FCU-1006	105/-30	103	105.5	2.5	2.2	0.10
	FCU-1006	105/-30	136	140.3	4.3	3.3	0.20
	FCU-1007	99/-48	72	74.8	2.8	2.1	0.15
	FCU-1007	99/-48	222.6	223.4	0.8	0.6	0.11
	FCU-1007	99/-48	289	303.5	14.5	10.0	0.22
	includes		289	290	1	0.5	1.48
	FCU-1007	99/-48	360.9	362	1.1	0.6	0.17
	FCU-1007	99/-48	379	382	3	1.5	0.10
	FCU-1007	99/-48	397	401	4	Unknown	0.12
	FCU-1020	76/-36	497	499	2	Unknown	0.10
	FCU-1020	76/-36	566	567	1	0.9	0.22
	FCU-1020	76/-36	576	577	1	0.9	0.21
	FCU-1020	76/-36	600.3	601.2	0.9	0.7	0.23
	FCU-1020	76/-36	663.8	666.5	2.7	Unknown	0.22
	FCU-1020	76/-36	672	674	2	Unknown	0.11
	FCU-1020	76/-36	692	694	2	1.5	0.10
	FCU-1020	76/-36	743	745	2	Unknown	0.09
	FCU-1020	76/-36	752	755	3	2.4	0.10
	FCU-1024	69/-24	516.2	518.5	2.3	Unknown	0.21
	FCU-1026	93/25	16	21	5	Unknown	0.16
	FCU-1026	93/25	16	20	4	Unknown	0.17
Zeus	FCC-0128	248/-56	887.6	893	5.4	2.0	0.21
	FCC-0128	248/-56	900	903.6	3.6	2.3	0.18
	FCC-0112	102/-57	1178.4	1182	3.6	2.4	0.10
	FCC-0113	69/-55	1544.5	1549	4.5	4.5	0.17
	FCC-0117	240/-51	1669.5	1676.3	6.8	3.1	0.15
Hollister (Nevada)							
Zone	Drill Hole Number Drill Hole Azm/Dip Sample From (feet) Sample To (feet) Width (feet) True W						
East Clementine	HUC-00036	025/39	407.7	411.0	3.3	2.4	
	HUC-00059	002/07	91.0	92.7	1.7	1.7	
	HUC-00060	315/-17	68.0	68.7	0.7	0.5	
	HUC-00060	047/-18	150.6	151.8	1.2	0.8	
	HUC-00063	016/49	228.3	233.0	4.7	3.6	
	HUC-00063	016/49	310.0	315.0	5.0	5.0	
	HUC-00063	016/49	319.0	322.0	3.0	2.3	
	Including		319.0	320.2	1.2	0.9	
	Including		320.2	322.0	1.8	1.4	
	HUC-00018	036/06	113.0	116.5	3.5	Unknown	
Gwenivere	HUC-00068	285/00	300.7	302.3	1.6	0.6	
West Gloria	HUC-00068	285/00	380.4	381.3	0.9	0.4	
	HUC-00070A	000/-02	114.4	126.0	11.6	11.6	
	HUC-00070B	000/-02	111.0	116.5	5.5	5.5	
	Including		111.0	113.0	2.0	2.0	
	Including		113.0	114.0	1.0	1.0	
	Including		114.0	115.0	1.0	1.0	
	Including		115.0	116.5	1.5	1.5	
	HUC-00073	50/28	121.5	124.8	3.3	1.5	
	Including		121.5	123.5	2.0	0.9	
	Including		123.5	124.8	1.3	0.6	



Surface Hatter Graben	HSC-00005	17/-62	1100.5	1103.0	2.5	Unknown
	HSC-00006	321/-49	1543.1	1544.0	0.9	0.6
	HSC-00006	321/-49	1657.2	1658.0	0.8	0.5
	HSC-00006	321/-49	1970.3	1970.8	0.5	0.3
	HSC-00006	321/-49	2267.3	2268.0	0.7	0.5
	HSC-00006	321/-49	2270.6	2273.5	2.9	2.1
	Including		2272.6	2273.5	0.9	0.6

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