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# Core Shack Abstract Guide

January 28 – January 31

Vancouver Convention Centre East

Roundup 2019 takes place on the unceded territories of the Coast Salish people, including the lands of the x<sup>w</sup>məθk<sup>w</sup>əyəm (Musqueam), Skwxwú7mesh (Squamish) and səliwətaʔ / Selilwitulh (Tsleil-Waututh) Nations.

# CORE SHACK ABSTRACT GUIDE

## CONTENTS

Adventus Zinc Corporation .....	4
Aldebaran Resources .....	5
Alexco Resource Corp .....	6
Ascot Resources .....	7
Aurelius Minerals Inc. ....	8
Avino Silver and Gold Mines Ltd.....	9
B2Gold Corp.....	10
Banyan Gold Corp.....	11
Bluestone Resources Inc.....	12
CANEX Metals Inc. ....	13
Chakana Copper Corporation .....	14
Coeur Silvertip Holdings Ltd. ....	15
Copper Mountain Mining Corporation.....	16
Dolly Varden Silver Corporation .....	17
Eastmain Resources Inc. ....	18
First Mining Gold .....	19
Forum Energy Metals.....	20
Gold Group: Radius Gold and Medgold Resources.....	21
Gold Standard Ventures Corp.....	22
Great Bear Resources Ltd. ....	23
Group Ten Metals .....	24
GT Gold Corp.....	25
Independence Gold Corp.....	26

# CORE SHACK ABSTRACT GUIDE

Integra Resources Corp.....	27
Jaxon Mining Inc. ....	28
K92 Mining Inc. ....	29
Kintavar Exploration .....	30
Kutcho Copper Corp. ....	31
Liberty Gold Corp.....	32
Marathon Gold Corporation.....	33
Mawson Resources.....	34
Midas Gold corp.....	35
Minaurum Gold Inc.....	36
Moneta Porcupine Mines .....	37
Nighthawk Gold Corp.....	38
North Arrow Minerals.....	39
NuLegacy Gold Corporation.....	40
Orezone Gold Corporation .....	41
Osisko Metals Incorporated.....	42
Osisko Mining Inc.....	43
Pan Global Resources Inc.....	44
PolarX Limited.....	45
Regulus Resources Inc. ....	46
Sabina Gold & Silver Corp.....	47
Sable Resources Ltd.....	48
Serengeti Resources and Kwanika Copper Corporation.....	49
SilverCrest Metals Inc. ....	51
Skeena Resources Ltd. ....	52

# CORE SHACK ABSTRACT GUIDE

SolGold Plc.....	53
Sphinx Resources Ltd.....	54
Sun Metals.....	55
Teranga Gold Corporation.....	56
Tinka Resources.....	57
Trevali Mining Corp.....	58
Triumph Gold Corp.....	59
Victoria Gold Corp.....	60
Wesdome Gold Mine.....	61
Westhaven Ventures Inc.....	62
White Gold Corp.....	63
Xanadu Mines.....	64



# CORE SHACK ABSTRACT GUIDE

## ADVENTUS ZINC CORPORATION

### EL DOMO DEPOSIT: HIGHLIGHTING VMS POTENTIAL IN ECUADOR AT THE CURIPAMBA PROJECT

**Jason Dunning Adventus Zinc Corporation; Christian Paramo and Marco Perez Salazar Resources Ltd.**

The El Domo Cu-Au-Zn VMS deposit is the core asset of the 22,000-hectare Curipamba project located in west-central Ecuador, about 2.5-hours northeast of port city of Guayaquil, off the Pan American Highway. The project is being explored by Adventus Zinc Corporation (75%) and Salazar Resources Ltd. (25%) with two active drill rigs.

Discovered in 2008, El Domo highlights the mineral potential of Curipamba project for not only additional VMS discoveries, but the property also has epithermal and porphyry style targets that have been developed since 2006. Since discovery, El Domo has seen over 54,000 metres of drilling in 272 drill holes with the key focus now being advancing El Domo towards a development decision.

Infill drilling continues to yield intercepts of high-grade, copper- and gold-rich semi-massive to massive sulphide mineralization within the open-pit constrained Mineral Resource. Intercepts from 2018 infill drilling include CURI-278 that intersected 4.58 metres of 5.29% copper, 19.60 gpt gold, 31.75% zinc, 364.2 gpt silver, and 2.88% lead; and CURI-285 that intersected 8.16 metres of 2.17% copper, 19.67 gpt gold, 23.17% zinc, 229.0 gpt silver, and 4.01% lead. A high-grade portion of CURI-285 included 3.71 metres of 3.00% copper, 36.55 gpt gold, 32.17% zinc, 411.3 gpt silver, and 6.80% lead (see August 20, 2018 news release). Infill drilling is anticipated to be completed by end of 2018.

El Domo contains an Indicated Mineral Resource totaling 8.8 million tonnes grading 1.62% copper, 2.34 gpt gold, 2.42% zinc, 48.0 gpt silver, and 0.27% lead. The Inferred Mineral Resource totals 2.6 million tonnes grading 1.29% copper, 1.09 gpt gold, 1.51% zinc, 29.0 gpt silver, and 0.14% lead (see January 31, 2018 news release). The NI 43-101 Technical Report was authored by Dr. Lars Weiershäuser, P.Geo., of RPA (based in Toronto, Ontario), an Independent Qualified Person as defined by NI 43-101.

# CORE SHACK ABSTRACT GUIDE

## ALDEBARAN RESOURCES

### THE ALTAR COPPER-GOLD PORPHYRY PROJECT, SAN JUAN PROVINCE, ARGENTINA

**Kevin B. Heather, Javier Robeto, Mariano Poodts, and John Black, Aldebaran Resources; Stan Foy, Sibanye-Stillwater and Tadeo Castaño, Peregrine Metals**

The Altar Project is a copper-gold-(silver-molybdenum) porphyry deposit located approximately 10 km from the Argentina-Chile border and 180km west of the city of San Juan in San Juan Province, Argentina. Altar forms part of a cluster of world-class porphyry copper deposits which includes: Los Pelambres (Antofagasta Minerals) located 25 km to the south, El Pachon (Glencore) located 28 km to the south, and Los Azules (McEwen Mining), located 50 km to the northeast. The Altar Project consists of several mineralized porphyry centers (QDM, Radio, Altar North, Altar Central, Altar East) aligned along a six-kilometer-long ESE-trending structural corridor.

The Altar porphyry Cu-Au deposit is associated with Middle-Late Miocene (~10-12 Ma) intermediate composition subvolcanic porphyries that intrude Early Miocene rhyolitic ignimbrites and

fine-grained andesite flows of the Pachon Formation. The Altar porphyry was deposited in an environment that transitions from the basal roots of a high-sulfidation epithermal lithocap to a sub-volcanic porphyry copper environment at depth.

Primary hypogene mineralization is hosted by multiple phases of intermediate to felsic intrusions associated with multi-generation, strong quartz and/or anhydrite sheeted veins and stockworks that contain variable portions of chalcopyrite, bornite, pyrite, and molybdenite within both potassic and sericitic alteration zones. Altar stands out from the other large porphyry deposits within the regional cluster by having a higher gold content, which contributes to the overall metal tenner. Additional mineralization occurs within a supergene enrichment blanket consisting predominately of chalcocite.

A total of 251 drill holes totaling 113,428 meters have been completed at the Altar Project between 1995 – 2018. The current 43-101 compliant resource at Altar is 2.06 Bt @ 0.33 % Cu & 0.08 g/t Au (Measured & Indicated) and 0.56 Bt @ 0.28 % Cu & 0.06 g/t Au (Independent Mining Consultants, 2018). The project offers significant upside exploration potential.

# CORE SHACK ABSTRACT GUIDE

## ALEXCO RESOURCE CORP

### GEOLOGY AND EXPLORATION OF THE KENO HILL SILVER DISTRICT, YUKON, CANADA

**A. McOnie (FAusIMM), VP Exploration, and S. Iles, Keno District Exploration Manager, Alexco Resource Corp**

Keno Hill, Yukon is Canada's second largest historic silver producing district with 214 million ounces of silver mined at an average grade of 44 oz/t from over forty occurrences between 1913 – 1989. As Canada's only primary silver producer, Alexco Resource Corp produced 5.6 million ounces silver from the underground Bellekeno Mine at an average grade of 725 g/t (23.1 oz/t) silver, 9.5% lead, 5.1% zinc between 2011 and 2013.

Since 2006, Alexco has conducted multidiscipline district scale exploration for high grade silver-lead-zinc resource over the 244 km<sup>2</sup> project area and have completed a total of 225,000 metres diamond drilling. The current silver resource base comprises 64 million ounces Indicated and 15 million ounces Inferred. The bulk of these resources are located within new blind discoveries made at the Flame & Moth and Bermingham prospects, where underground mining development is currently in progress.

The high grade silver-lead-zinc mineralization is deposited in narrow, hydrothermal siderite – quartz veining developed in the regionally extensive competent, but highly deformed, Mississippian Keno Hill Quartzite Formation. Vein formation is fault controlled and analysis of the distribution of mineralization in the Bellekeno Mine has led to an understanding of the structural controls of the wider mineral system and provided a tool for effective exploration targeting. Aerial geophysical surveys have guided understanding the geologic framework, with detailed petrology and geochemical study of the deposits providing additional exploration vectors.

The silver minerals associated with galena and sphalerite, belong predominantly to the tetrahedrite series, although pyragyrite and native silver are not uncommon. The mineralization is dated at 88 Ma and the deposits are spatially associated with the occurrence of 93 Ma Tombstone intrusive suite related to orogenic gold deposits in the region.

# CORE SHACK ABSTRACT GUIDE

## ASCOT RESOURCES

### THE PREMIER PROJECT: EPITHERMAL GOLD MINERALIZATION IN THE GOLDEN TRIANGLE

Lars Beggerow, VP Geoscience & Exploration, Ascot Resources

The Premier Project is located at the southern tip of British Columbia's Golden Triangle approximately 20km by road from Stewart. The project has well developed infrastructure with road access, a hydro electric power plant connected to the regional grid, an existing mill building and a tailings facility close to a deep-water port at Stewart.

The Premier Project covers approximately 7,400ha of prospective ground with established gold-silver mineralization over a strike length of approximately 15km. Mineralization is hosted in quartz breccias and stockwork formed by a structural system within Jurassic andesitic volcanics and dacitic porphyries. In this intermediate sulfidation epithermal system, gold occurs as native metal or alloyed with silver as electrum accompanied by pyrite, sphalerite, galena and chalcopyrite.

The Premier deposit was discovered in the early 1900s and has produced in excess of 2Moz of gold and 45Moz of silver since then. The mill building and the tailings facility were constructed in the late 80s by Westmin Resources who attempted to extract material in an open pit.

Ascot Resources has been exploring the property since 2007 and established the current resource of 2.78Mt @ 7.46g/t Au (667koz Au) in the Indicated category and 6.03Mt @ 7.18g/t Au (1.39Moz Au) in the Inferred category (RPA, December 3, 2018 at a 3.5g/t AuEq cut-off). The Company is currently conducting engineering studies towards a PEA that will evaluate the possibility of a restart of the Premier mill.

# CORE SHACK ABSTRACT GUIDE

## AURELIUS MINERALS INC.

### MIKWAM DEPOSIT, NORTHERN ONTARIO. ABITIBI GOLD BELT, CASA BERARDI

**Jeremy Niemi, Vice President, Aurelius Minerals Inc.**

Core to be displayed: AUL-18-15 from ~204 to 221.7m down the hole. This includes intersections of 5m @ 11.82 g/t Au and 7.2m @ 9.36 g/t Au. The host rock is quartz and pyrite-arsenopyrite veins.

Mineralization style: The Mikwam deposit is a lode gold deposit, consisting of gold-bearing major quartz-carbonate-sulphide veins.

Mineral Resource: The current resource statement for Mikwam is an inferred resource of 1.8 Mt grading 2.34 g/t Au (136k ounces Au contained).

Current stage: Exploration, focus on resource expansion.

Aurelius Minerals commenced field work, comprised of two drilling campaigns and ground truthing of historical work, in 2018 on its Mikwam Property which is located on the Ontario side of the Casa Berardi Deformation Zone (CBDZ). Historical work on the property has occurred in brief, disconnected campaigns by several different companies dating back to the 1980's when Newmont identified gold in a regional overburden (till) sampling campaign. Aurelius has located casings from many of the historical holes and in many cases corrected the collar locations and azimuth/dip of the holes. This vastly improved the data set underpinning the geological model and put the company in a better position to commence the Phase 2 exploration campaign.

During the Phase 2 campaign (August-October 2018) the company intersected one of the best intervals to date at the project and through a systematic campaign was able to delineate a consistent gold bearing quartz-sulphide zone which appears to be structurally controlled.

The mineralization is open at depth and along strike and there is opportunity to identify additional zone along the 5 km of strike length on the CBDZ within the company's land position.

Nearby deposits: Casa Berardi is the nearest analogous deposit and is 30 km to the east. Mikwam is along strike of the regional structural system hosting the Casa Berardi deposit.

# CORE SHACK ABSTRACT GUIDE

## AVINO SILVER AND GOLD MINES LTD.

### BRALORNE GOLD MINES: EXPLORING NEW VEINS IN AN HISTORIC GOLD CAMP

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**Ben Eggers, Rob Allen, Georg Nussbaumer, Tom Johnson, Joel Knickle, Antoine Soucy-Fradette, Bralorne Gold Mines Ltd; Garth Kirkham, Kirkham Geosystems Ltd.**

Bralorne Gold Mines Ltd., a subsidiary of Avino Silver and Gold Mines Ltd., is undertaking renewed exploration of its 100% owned Bralorne-Pioneer Property located in the south-west corner of British Columbia, approximately 240 kilometers NNE of Vancouver, BC.

The historic King, Bralorne and Pioneer mines all lie within the current Bralorne-Pioneer property. These mines developed a total of 30 veins through a number of shafts and 80 kilometers of tunnels on 44 levels, the deepest of which traced the 77 vein to a depth of 1900 meters.

Total historic production from the Bralorne and Pioneer mine is recorded as 7.3 million tonnes grading 17.7 grams gold per tonne (129.14 tonnes of gold equating to 4.2 million ounces from processing of 9.0 million short tons at an average grade of 0.52 ounce per ton), making the Bralorne Camp the largest lode gold producer in British Columbia.

The \$6M exploration campaign underway at Bralorne will be the most comprehensive in the 100 + year history of the area and includes a 28,000m surface drill program. The scope of this program encompasses the rigorous re-examination of previously mined veins, as well as an aggressive attempt to open up entire new portions of the Bralorne structural block.

By challenging old paradigms of geological interpretation, large areas of potentially fertile and under-explored tenure are now viewed as exciting opportunities for new discovery.

# CORE SHACK ABSTRACT GUIDE

**B2GOLD CORP.**

## **FEKOLA NORTH EXTENSION AU DISCOVERY, KÉNIÉBA, KAYES, MALI**

**Chris Bell and Andrew Brown, B2Gold Corp.**

The Fekola North Extension is a new discovery by B2Gold Corp. contiguous with the company’s flagship asset, the Fekola Mine in Western Mali. This discovery grows the Indicated Resource at Fekola to 92.81 million tonnes at 1.92 g/t for a total of 5.73 million ounces of gold. In addition, an Inferred Resource of 26.5 million tonnes at 1.61 g/t Au, for approximately 1.4 million ounces of gold, has been added to the inventory. The Fekola North Extension remains open along strike to the north.

The Fekola gold mine and the Fekola North Extension discovery are hosted within the Proterozoic Kedougou-Kenieba Inlier of the Birimian Supergroup (2200-2050 Ma) of the West African Craton. The Inlier is an erosional window through the younger (600-350 Ma) sediments of the Taoudeni Basin. The deposit occurs along the Senegal-Mali shear zone, a deep-seated crustal-scale structure with a gold endowment exceeding 40 million ounces.

Gold mineralization at the Fekola North Extension is located at the intersection of shallow north-plunging folded greenschist facies meta-sediments and parallel, steeply dipping, north-south striking high-strain zones. Representative samples from all lithologies and their altered and mineralized variants will be on display along with a continuous interval transitioning into mineralized banded siltstone-mudstone and conglomerate stratigraphy. This interval will display the association between increasing strain and dolomite-albite alteration with disseminated pyrite typical of gold mineralization in the discovery.

The Fekola gold mine achieved commercial production February 3rd, 2018 and is forecast to produce over 420 Koz Au in 2018. B2Gold’s technical team is conducting engineering and technical studies to evaluate the potential to expand the current Fekola mine and mill facilities. This work will assess an increased throughput from 5.5 million tonnes per annum during 2018 to 7.5 million tonnes per annum to accommodate mineral resources in the Fekola North Extension discovery.

# CORE SHACK ABSTRACT GUIDE

## BANYAN GOLD CORP.

### INTRUSION-RELATED, SEDIMENT-HOSTED GOLD MINERALIZATION: PERSPECTIVES FROM THE HYLAND AND AUREX-MCQUESTEN PROJECTS, YUKON

**James Thom**

Banyan Gold Corp. successfully completed two robust diamond drilling programs on its Yukon Gold Projects: Hyland and Aurex-McQuesten. The 2018 exploration program at Hyland was focused on the establishment of mineralization continuity between the current N.I. 43-101 compliant resource at the Main Zone and the Camp Zone, over areas previously untested. To this end, 1.25km of strike length was tested by 1300m of core from 11 diamond drill holes. The diamond drilling activities targeted the projected shallow dipping upper limb of the Main Zone resource in an attempt to delineate the location of the hinge zone for future drilling programs. In addition to the diamond drilling, eight trenches consisting of 1194m were completed towards identification of surface expressions of gold mineralization. This season's program at Aurex-McQuesten focused on diamond drilling of the McQuesten Gold Zone and property wide geochemical surveys over the Aurex claim group. Drilling activities targeted an approximately 90m thick package of calcareous clastic sediments that host gold mineralization within stratabound retrograde skarn altered horizons and sheeted quartz arsenopyrite veins with associated brittle fault and vein breccias. With the addition of this year's 1,400m of diamond drilling, a ~500m x ~225m x ~90m thick block dipping ~30° to the south will have been tested with nominal drill spacing at 50m in five fences spaced 100m apart. Over 4000 thousand soil samples have been collected and analyzed by portable XRF. Geochemically anomalous samples identified by XRF analysis have been submitted for commercial laboratory analysis. Select samples from both drilling programs and hand samples collected from the Hyland Trench Program will be on display at our booth in the Core Shack at AME Roundup 2019.

# CORE SHACK ABSTRACT GUIDE

## BLUESTONE RESOURCES INC.

### CERRO BLANCO – DEVELOPING CENTRAL AMERICA’S NEXT HIGH-GRADE GOLD MINE

**David Cass, Vice President of Exploration, Bluestone Resources Inc.**

The Cerro Blanco project in Guatemala is a classic hot springs-related low-sulphidation epithermal system exhibiting both high-grade vein and low-grade disseminated mineralization. The project is permitted for a high-grade underground mining operation and has over 3 km of underground development. Since acquiring the project in 2017, Bluestone has undertaken detailed geological studies including 12,654m of drilling and an updated high-grade underground resource estimate that identified 1.2 million ounces grading 10.1 g/t Au in M+I categories and 0.36 million ounces in Inferred. Total in-situ gold resources, including low-grade disseminated mineralization in overlying cap rocks are 2.99 million ounces in M+I categories (61 million tonnes at 1.5 g/t Au).

High-grade mineralization is hosted in the sedimentary Mita unit as two upward-flaring vein arrays that converge downwards and merge into basal feeder veins where drilling has demonstrated significant widths of high-grade mineralisation e.g. 21.4 m grading 10 g/t Au and 35 g/t Ag (Hole UGCB18-92). Veins are dominated by crustiform and colloform chalcedony plus subordinate adularia and calcite. Bonanza gold grades are associated with ginguru banding and carbonate replacement textures. Sulphide contents are low, typically <3 volume %.

Overlying the Mita rocks, the Salinas unit hosts low-grade disseminated gold mineralization in silicified polymictic conglomerates interbedded with siliceous sinter formed by surficial hot-spring activity. The base of the Salinas is marked by an aphanitic rhyolite cryptodome.

Cerro Blanco formed immediately beneath and within a fault-bounded graben in a back-arc rift setting characterized by bimodal volcanism. The features observed at Cerro Blanco are common to many shallowly-eroded, low- and intermediate-sulphidation epithermal deposits and a direct comparison can be made with Fruta del Norte in Ecuador and Ivanhoe in Nevada. The pristine nature of the veins at Cerro Blanco can be explained by the complete preservation of the system part-owing in part to the very young age of the deposit and paucity of post-mineral faulting.

# CORE SHACK ABSTRACT GUIDE

## CANEX METALS INC.

### THE GIBSON PROPERTY - HIGH GRADE EPITHERMAL GOLD SILVER VEINS IN NORTH CENTRAL BRITISH COLUMBIA

Shane Ebert, President, CANEX Metals Inc.

The Gibson Gold-Silver Property is located in north central British Columbia 50 kilometres west of the Mount Milligan Cu-Au Mine and 40 kilometres southeast of the Kwanika Cu-Au deposit. The property sits within a northwest trending belt of alkalic porphyry deposits and related prospects located within the Quesnellia Terrain. Gibson contains intermediate sulfidation style epithermal base-metal rich quartz veins and breccias hosted in hornfelsed sedimentary and volcanic rocks of the Lower Jurassic Takla Group. The mineralization is located within about 500 metres of the contact of the Early Jurassic Hogem Batholith.

CANEX Metals acquired Gibson in 2017 and shortly after built an access road and conducted trenching. The mineralized zone was exposed over a 200m by 400m area that remains open. In 2018 CANEX drilled 10 holes, intersecting several quartz-sulfide veins ranging up to 2.5m in true width, and discovered a new zone of mineralization adjacent to the main trend. Drilling and trenching show mineralized zones occur along both flat dipping and steeply dipping fault structures, with multiple episodes of veining, brecciation, and fault movement.

Assay results for the 2018 drilling are expected in December 2018 or January 2019. A historic hole drilled in the same area by Noranda returned 6.7 g/t Au and 1828 g/t Ag over 4.26 metres. Surface trench samples from the zone returned up to 5.3 g/t Au and 1380 g/t Ag over 1 metre.

On display is a 2.5-m wide intersection of quartz sulfide veining containing abundant pyrite, sphalerite, and galena with minor amounts of chalcopyrite and arsenopyrite, encountered between 61 and 64m depth in hole G18-10. Also on display are intersections of various quartz-sulfide veins and zones of quartz-carbonate veining locally containing crustiform banding, cockade textures, sulfosalts, and fine banded sulfides. Additional information on Gibson including core photographs is available at [www.canexmetals.ca](http://www.canexmetals.ca).

# CORE SHACK ABSTRACT GUIDE

## CHAKANA COPPER CORPORATION

### THE SOLEDAD PROJECT, PERU – HIGH GRADE CU-AU-AG HOSTED IN MULTIPLE TOURMALINE BRECCIA PIPES.

**David Kelley, President and CEO, Doug Kirwin, Chairman and John Black, Director, Chakana Copper Corporation**

The Soledad project is in Ancash province of central Peru, approximately 260 km north-northwest of Lima and 35 km south of Barrick’s Pierina mine. Previous exploration identified numerous high-grade quartz-tourmaline-sulfide breccia pipes that crop out at surface. Whereas the mineralization hosted in the breccia pipes is impressive in terms of grade and vertical extent, previous explorers were focused on a blind mineralized porphyry target inferred to be the source of the breccia mineralization. Chakana is testing the breccia pipes to determine if they host economic mineralization.

The breccia pipes are principally hosted in the Calipuy group volcanic rocks, consisting of andesite flows, tuff and dacite with a composite thickness of over 2,000m. A secondary host is monzodiorite that intrudes the volcanic rocks. The breccia pipes have dimensions ranging from 25 to 200 m in width at surface with separation between the pipes of 100-500m. The breccia is polymictic and contains clasts reflecting the adjacent host rock, either andesite, tuff or monzodiorite. Clasts of andesite and tuff are generally tabular, or “shingle” in shape, and are strongly altered to quartz-sericite-tourmaline. Breccia clasts also exhibit curvilinear fractures diagnostic of decompressive shock texture. Within the breccia, sulfide mineralization occurs in the matrix and as clast replacement. Grades are typically highest on the margins of the breccia bodies where permeability was best developed. Based on petrography, the sulfide assemblage includes chalcopyrite, hypogene chalcocite, digenite, pyrite, tetrahedrite, boulangerite, bournonite, and arsenopyrite. Sphalerite and galena are common on the margin of the breccia and in veinlets in the fractured wall rock. Gold occurs as free grains in the 20um to 2.8mm size range within pyrite and along sulfide grain boundaries. Mineralogy varies between breccia pipes. For example, arsenopyrite is common in Bx 1, but is generally absent in Bx 5.

Chakana has completed over 22,200m of drilling on four of the 15 known breccia pipes that crop out at surface. Numerous additional blind targets have been identified with mapping, soil geochemistry and geophysical methods. Highlights from drilling includes 439.8m with 1.45 g/t Au, 50.4 g/t Ag, and 0.69% Cu from surface in Breccia Pipe 1, and 264m with 1.3 g/t Au, 24.3 g/t Ag, and 0.71% Cu from surface in Breccia Pipe 5. Mineralization has been intersected to a depth of 490m in Bx1 and 410m depth in Bx 5 and remains open at depth.

# CORE SHACK ABSTRACT GUIDE

## COEUR SILVERTIP HOLDINGS LTD.

### THE STERLING GOLD DEPOSIT OF THE BARE MOUNTAINS, SOUTHERN NEVADA

**Joseph L. Mulvaney-Norris, Consulting Geologist, Coeur Sterling Inc.**

The Sterling property is positioned on the eastern flank of the Bare Mountains, 150 kilometers northwest of Las Vegas. The Coeur Sterling Gold deposit, a past-producing mine, is a structurally controlled, sediment-hosted gold deposit. It currently contains an inferred resource of 231,000 ounces gold grading 3.67 grams per tonne (g/t) with a 1.00 g/t cut-off <sup>(1)</sup>. Some drilling highlights at Sterling reported by Northern Empire include: 10 meters (m) at 14.59 g/t gold, 9.05 meters at 8.66 g/t, 7.59 meters at 8.25 g/t (core hole) <sup>(2)</sup> and 5.30 m at 16.52 g/t gold <sup>(3)</sup>. Mineralization occurs as free gold within an oxidized breccia that formed along the major contractional fault which thrust the Proterozoic Sterling and Wood Canyon formations above the Cambrian Bonanza King formation.

Other known resources in the northern part of the property, called the Crown Zone, include Daisy, Secret Pass, and SNA resources. These are sediment- and volcanic- hosted epithermal gold deposits localized near the Fluorspar Canyon detachment fault, which also hosts the historic Bullfrog District deposits to the west and Corvus Gold's Mother Lode resource adjacent to our SNA resource.

#### References -

1. Sterling Property, Nye County, Nevada, USA: A Property Under Option to Purchase by Northern Empire; Technical Report submitted to Northern Empire Resources Corp., Effective Date: March 29, 2017.
2. Northern Empire Resources Corp. News Release, December 4, 2017.
3. Northern Empire Resources Corp. News Release, January 11, 2018

### THE SILVERTIP CARBONATE-HOSTED AG-PB-ZN DEPOSIT, NORTHERN BRITISH COLUMBIA, CANADA

**Coeur Silvertip Holdings Ltd.**

The Silvertip Mine is situated in northern British Columbia, just south of the Yukon border, approximately 90 km west-southwest of Watson Lake, Yukon. Total year-end 2017 resources reported by Coeur <sup>(1)</sup>, were 2,589,000 tons indicated resource grading 10.27 opt Ag, 9.41 % Zn and 6.73% Pb; with an additional 507,063 tons inferred resource grading 10 opt Ag, 9.81% Zn and 6.18% Pb.

Coeur implemented an aggressive surface and underground drilling campaign at Silvertip in 2018. As reported on July 26, 2018 <sup>(1)</sup>, Coeur had completed 44,500 meters (m) drilling. The goal of this campaign was to infill historic drilling and prove-up the indicated resource, as well as increase overall inferred tons. A few significant intercepts from the program as reported by Coeur <sup>(2)</sup> include 6.3m @ 845.3 gpt Ag, 10.9% Zn, 15.3% Pb (Central Zone); 11.4m @ 193.3 gpt Ag, 18.3% Zn, 3.2% Pb (Discovery Zone); and 3.8m @ 905.5 gpt Ag, 29.2% Zn, 16.5% Pb (Silver Creek Zone). A second campaign continued into third quarter.

# CORE SHACK ABSTRACT GUIDE

## COPPER MOUNTAIN MINING CORPORATION.

### LITTLE EVA, AN IOCG DEPOSIT IN NORTHERN QUEENSLAND, AUSTRALIA

**Peter Holbek, VP Exploration, Richard Joyes, Sr. Geologist, George Ross, Exploration Manager Australia and Roland Bartsch, Country Manager, Australia, Copper Mountain Mining Corporation**

Copper Mountain Mining Corp's Eva Copper Project is situated within the Cloncurry district of the Mt Isa Inlier, which maybe of the best endowed metallogenic provinces in the world, containing a variety of stratiform zinc, lead, and copper deposits (Mt Isa, Dugald River), silver-lead-zinc deposits (Cannington) and IOCG deposits (Earnest Henry, Osborne, Mt. Elliot, and others). The project claim area covers more than 4,000 km<sup>2</sup> of prospective stratigraphy within the Eastern Fold Belt of the Mt. Isa Inlier. The Eva Project includes a dozen near-surface IOCG deposits, five of which are currently planned for production, as outlined in a recent Feasibility Study. The study is based on Proven and Probable Reserves of 117Mt grading 0.40% Cu and 0.07g/t Au. The Little Eva deposit, with Measured and Indicated resources at 122Mt grading 0.37% Cu and 0.07g/t Au, at a 0.17% Cu cut-off grade, provides 83% of the current project's reserves. Proximal infrastructure, low strip ratio, high metallurgical recoveries for both copper and gold with no deleterious elements, and a high-grade starter pit, all contribute to the project's economic viability. The project will produce an average of 90M pounds of copper and 19K oz of gold annually, over the first nine years of production.

The IOCG deposits of the Cloncurry District formed in the waning stages of the Isan orogeny (1540-1500Ma) and have a close spatial and temporal association with I-type granitoids. The metavolcanic and metasedimentary rocks hosting Eva mineralization have been extensively deformed and metasomatized and are likely at least 200Ma older than the mineralization. Mineralization, which is predominately chalcopyrite, occurs as breccia and fracture fill, veins, and disseminations. Gangue mineralogy includes magnetite, pyrite and carbonate. Pervasive sodic-calcic (+/- iron) alteration is regional but significantly more intense, iron-rich and hotter, as indicated by high-temperature K-Fe-Ca-Mg porphyroblasts, within mineralized areas. Pervasive late-stage carbonates occur as veins and fracture fill. The Little Eva deposit is approximately 1.2km long, crudely elliptical in shape, up to 500m wide, fault bounded and occurs at the apex of major fault intersections. Within the deposit, mineralization displays evidence of strong structural and lesser stratigraphic control, where competent, mafic volcanic rocks are a preferred host.

The Little Eva deposit is overlain by a 10-20m thick zone of oxidation but has a moderate to strong copper in soil geochemical response as well as having weak to moderate magnetic and IP chargeability responses.

# CORE SHACK ABSTRACT GUIDE

## DOLLY VARDEN SILVER CORPORATION

### HIGH-GRADE SILVER CONTINUES TO BE FOUND IN THE HISTORIC DOLLY VARDEN SILVER MINING CAMP, NORTHERN BRITISH COLUMBIA, CANADA

**Ben Whiting, Vice President – Exploration, Dolly Varden Silver Corporation; Rob van Egmond, Chief Geologist, Dolly Varden Silver Corporation; Chris Sebert, Consulting Geologist; Michelle McKeough, Project Geologist, TerraLogic Exploration Inc.**

Exploration continues to yield thick, high-grade silver intercepts in the historic Dolly Varden Silver Mining Camp. The Dolly Varden Mine (1919-1921) and Torbrit Mine (1949-1959) were past producing silver-lead-zinc operations located in The Golden Triangle of northwestern British Columbia, Canada. Within the Camp there are multiple silver and base metals mineralized deposits. The 2018 program consisted of 29,108 metres of diamond drilling in 84 drill holes and included significant intercepts from several areas of the property.

On January 7, 2019, the company announced the results of hole DV18-163, drilled in the Torbrit Mine area, which contained 75.5 metres (65.3 m estimated true thickness) grading Ag 419 g/t. Within this intercept were 16.0 metres (13.9 m estimated true thickness) grading Ag 1,240 g/t.

There are several styles of mineralization, including siliceous exhalative horizons and epithermal quartz veins. The Dolly Varden-Torbrit Horizon (“DVTH”) is marked by a distinctive upper zone of jasper and quartz breccias and stockworks, with bladed barite pseudomorph textures and colloform banding, overlying a lower zone of smoky quartz and sulphides. Mineralization consists of acanthite, native silver, pyrrargyrite, pyrite, galena and sphalerite.

Structurally, the deposits are hosted in Jurassic Hazelton Group volcanoclastics in a northward-plunging synform. Locally there are steeply dipping pre-, syn- and post-mineral faults, which offset the horizon. Northeast of the Torbrit deposit is located the Moose-Lamb Fault, which has been re-interpreted as a syn-basinal reverse fault.

Overall, these intercepts illustrate the high potential for further discovery of high-grade silver in this historic Dolly Varden Mining Camp.

# CORE SHACK ABSTRACT GUIDE

EASTMAIN RESOURCES INC.

## THE PERCIVAL DISCOVERY – EXPLORING THE DISTRICT POTENTIAL OF THE CLEARWATER PROPERTY

**Bill McGuinty, P.Geo. VP Exploration**

Percival is located 14 km ESE of the Eau Claire deposit in the Knight sector of the Knight-Serendipity Volcano Sedimentary Horizon (KS Horizon), on the Clearwater Property. The KS Horizon is characterized by an extensive package of metasedimentary and metavolcanic rocks metamorphosed from upper greenschist to lower amphibolite facies. Percival is also affected by deformation related to major crustal scale structures specifically, the Cannard Deformation zone. It's stratigraphy comprises foliated, predominantly south facing metasedimentary rocks underlain by marine mafic metavolcanics.

The Knight sector is interpreted at the SW end of the prospective volcano-sedimentary sequence. Discovery Holes ER18-822 and ER18-823 were drilled on a single section to undercut gold mineralization exposed in a sequence of silicified metavolcanics and metasediments during Eastmain's summer surface exploration program. These two holes intersected a silicified, sulfide rich, and gold mineralized brecciated interval, interpreted to have a 50 m true thickness and extends from surface to a known vertical depth of 100 m. Holes ER18-824 to ER18-831 were drilled to flank Percival discovery holes ER18-822 and ER18-823, testing for the extension of the brecciated units over a NE strike length of 200 m and across stratigraphy over 250 m.

### Breccia Units

Sedimentary breccias are intersected throughout the Percival area. Breccias are principally seen in argillite and mudstone units and to a lesser degree in siltstones and greywackes. Fragment components are polymictic and lithologies are generally representative of host units in the sequence, indicating the breccias are locally derived from slumping or mass flow. Breccias are identified as potential mineral hosts due to their relatively higher porosity which may create ideal traps for hydrothermal flow.

Most silicified breccias intersected at Percival are gold mineralized, with pyrrhotite and pyrite present in both clasts and matrix, suggesting prolonged hydrothermal activity through evolution of the sedimentary package. Gold mineralization is observed to increase with intensity of silicification, in breccias in particular.

# CORE SHACK ABSTRACT GUIDE

## FIRST MINING GOLD

### FIRST MINING GOLD

#### Chris Osterman, COO, First Mining Gold

Presented core is from the Goldlund Project 100% owned by First Mining Gold located in the western Wabigoon Sub-province of Superior province approximately 40km North of Dryden. Displayed core interval is from the drill hole GL-17-103. This hole was drilled as a part of a delineation and resource upgrade drill program during 2017. Core is representative of “Goldlund style” of mineralization. Gold on the property can be almost exclusively found in tonalite (granodiorite in mine term) sills/dykes in free form, electrum and tellurides (calaverite and petzite). The tonalite sills are nearly vertical, often parallel with gabbro sills located inside mafic volcanics (metabasalt). Mineralization is associated with quartz-ankerite veins and alteration halos along the veins. The veins are fracture fillings striking transverse to the general trend of the tonalite sills with dips from 30° to 70°. The veins range in width from <1 mm to >30.0 cm. Veins were formed as a result of competency difference between the brittle tonalite and ductile metabasalt.

At the time of this submission (November 1<sup>st</sup>, 2018) there is a mineral resource estimate and PEA dated January 23, 2017 (the “Goldlund Technical Report”), which can be found under First Mining’s SEDAR profile at [www.sedar.com](http://www.sedar.com), and on First Mining’s website. The report has been prepared by WSP in accordance with National Instrument 43-101 *Standards of Disclosure for Mineral Projects* (NI 43-101). Indicated Resource: 9.3 Mt grading 1.87 g/t Au containing 560,000 ounces of gold and Inferred Resource: 40.9 Mt grading 1.33 g/t Au containing 1,750,000 ounces of gold. This estimate will be updated with the results from 2017 drilling program.

Currently the Goldlund project is in exploration and resource upgrade state. During 2017 and part of 2018 resource definition drilling continued to improve the confidence of existing resources. During summer 2018 regional exploration program was completed on two showings (Miller and Eaglelund) on the Goldlund claim block. Drilling on the Miller showing proved the potential of gold mineralization on a regional scale.

Recent significant intersections from the Miller showing:

Hole ID	From (m)	To (m)	Length (m)	Au g/t
MI-18-002	1.5	109.5	108.0	2.44
MI-18-003	115.0	130.0	15.0	1.41
MI-18-007	94.5	116.0	21.50	5.43

Nearby significant projects:

Treasury Metals, Goliath Gold Project located 20 km south-west of the Goldlund project in Wabigoon Sub-province has 1,165,800 ounces Au Eq in Measured and Indicated and 341,300 ounces Au Eq Inferred category. This project is advancing to bankable feasibility study; and.

New Gold, Rainy River Mine commenced commercial production in November 2017. Has 4.4M t of Au in reserve and 1.8M t in M+I category. The mine is located app. 200km south-west of the Goldlund project in Wabigoon Sub-province.

# CORE SHACK ABSTRACT GUIDE

## FORUM ENERGY METALS

### JANICE LAKE PROJECT: A SEDIMENTARY-HOSTED COPPER PROSPECT IN NORTHERN SASKATCHEWAN

**Rick Mazur, President and CEO, Forum Energy Metals; Ken Wheatley, Vice-President Exploration, Forum Energy Metals**

The Janice Lake prospect is located in northern Saskatchewan 200km north of La Ronge. Copper was discovered in the area in 1953 and has been sporadically investigated since by various explorers. Forum acquired the claims in early 2018 and completed a small drill program in August/September.

The project is underlain by metamorphosed rocks of the basal Wollaston Group; the Rafuse and Janice Lake formations formed from a series of arkosic sediments, fanglomerates/conglomerates, and psammo-pelitic to pelitic sediments.

Copper in the form of chalcocite ( $Cu_2S$ ) appears to be strata-hosted mainly in the mafic rich meta-pelitic layers, but can also be found in more arkosic materials. Native copper is also present and can be found with the chalcocite and as disseminations and fracture/vug fillings, mainly on the upper and lower borders of the chalcocite zone. At this time, native copper appears to be deposited by a later mineralization event. The copper has been investigated by drilling to 200m depth, and is present in over 24 outcrop occurrences on the property over a strike of 8km.

Higher grades of copper (>4%), especially in the chalcocite zones, show elevated Ag with local grades of up to 45 g/tonne. Lead and zinc are also locally present and have returned up to 1% over 5.5 metres.

Noranda noted that copper mineralization occurred along the outer margin of magnetite-bearing metasediments, and an airborne magnetic survey effectively mapped out the distribution of the unit and can be used to identify areas of potential mineralization. Magnetic susceptibility readings taken on the 2018 drill core showed a drop on the readings below the mineralized zone.

Phelps Dodge performed 2D inversion depth modelling on historic IP data and mineralization appears to be associated with chargeability highs, with or without resistivity lows.

# CORE SHACK ABSTRACT GUIDE

## GOLD GROUP: RADIUS GOLD AND MEDGOLD RESOURCES

### GOLD GROUP MAKES TWO NEW EXPLORATION DISCOVERIES: WITH RADIUS GOLD IN MEXICO AND MEDGOLD RESOURCES IN SERBIA

**Bruce Smith, Exploration Manager, Radius Gold, and Simon Ridgway, Chairman, Medgold Resources**

At Radius Gold's Amalia project in Chihuahua, Mexico, recent drilling identified a significant high grade discovery. A 9-hole (1909m) program was completed by Radius and Pan American Silver under a joint venture agreement. Several targets were tested along a strike of 1.8km following a large regional fault system hosting epithermal gold and silver mineralization.

At Campamento target, five drill holes defined 650m strike of banded veining, stockworks and multiphase breccia with gold and silver mineralization. All five drill holes intercepted gold and silver mineralization with the deepest hole AMD009 cutting 26m at 7.08g/t Au and 517 g/t Ag including bonanza interval of 5m at 14.71 g/t Au and 1378 g/t Ag.

The initial drilling tested the targets to 100 below ground surface. On strike from Campamento, high grade gold and silver mineralization outcrops at intervals vertically at least 600m below Campamento. Similar epithermal deposits of the Sierra Madre (e.g. Palmerejo, Pinos Altos) are known to have mineralization occurring vertical intervals up to 700m. To date the Radius has tested a limited part of the system and intends to follow the high-grade mineralization along strike and to depth with drilling in 2019.

Medgold Resources Tlamino Project located in southeast of Serbia and funded within a joint venture arrangement with Fortuna Silver Mines. At Tlamino structurally controlled intermediate sulphidation Au-Ag(-Pb-Zn) mineralization occurs within tectonic breccias developed along a regionally extensive, low-angle detachment fault.

Medgold acquired Tlamino in 2016 and initial channel sampling of the Discovery Outcrop returned a best interval of 84m at 5.6 g/t Au and 105.2 g/t Ag. In 2018 initial drilling intersected high grade gold, silver and base metal values in 17 out of 20 drill holes with a best intercept of 30.0 m of 5.45 g/t Au. Resource definition drilling is planned for 2019.

# CORE SHACK ABSTRACT GUIDE

## GOLD STANDARD VENTURES CORP.

### DEVELOPMENT AND EXPLORATION SUCCESS IN THE RAILROAD DISTRICT, CARLIN TREND, NEVADA, USA

**Steven R. Koehler, Donald A. Harris, Mac R. Jackson, Melanie N. Newton, Michael T. Harp, Robert J. Edie and Rebecca A. Goddard, Gold Standard Ventures Corp.**

During 2018, Gold Standard Ventures Corp. (GSV) accelerated development drilling on the Dark Star and Pinion oxide gold deposits to reduce drill spacings to approximately 30m in critical portions of the deposits. In addition to development, six exploration targets were drill tested within GSV's 208 square kilometer Railroad-Pinion Project.

In the northern portion of the Dark Star deposit, drilling confirmed resource expansion potential to the north, west and at depth below the current resource model. Exceptional drill results included: 213.4m of 2.39 g Au/t, including 41.2m of 5.79 g Au/t in DR18-43; 161.5m of 3.33 g Au/t, including 33.5m of 6.48 g Au/t in DR18-83; and 229.8m of 2.08 g Au/t in DC18-07.

At Pinion, drill intercepts (15.2m of 1.42 g Au/t in PR18-98) suggest near-surface, oxide resource expansion potential exists to the south and west of the deposit. On the east side of Pinion, oxide intercepts (15.6m of 3.26 g Au/t in PC18-06; and 16.8m of 1.27 g Au/t in PR18-76) are hosted within a thicker portion of the multilithic host horizon and extend mineralization below the current resource model.

Jasperoid Wash, Dixie and Ski Track are new and expanding exploration areas where gold mineralization is hosted in favorable Pennsylvanian-Permian rocks, similar to Dark Star. At Jasperoid Wash, near-surface oxide mineralization remains open in multiple directions and results to date indicate the potential for a maiden resource estimate. At Dixie, drill intercepts in DX18-06 (67.1m of 1.05 g Au/t) and DX18-07 (33.5m of 0.65 g Au/t) are similar to those at Dark Star and other footwall deposits on the Carlin Trend - stratabound gold zones in carbonate rocks in the footwall of large displacement normal faults. At Ski Track, surface rock samples returned values ranging from <0.005 to 5.58 g Au/t in silicified and oxidized rocks.

# CORE SHACK ABSTRACT GUIDE

## GREAT BEAR RESOURCES LTD.

### GREAT BEAR RESOURCES' DIXIE PROJECT: HIGH GRADE, NEAR SURFACE GOLD DISCOVERY IN RED LAKE

**R. Bob Singh, P.Geo., Vice President Exploration, and Andrea Diakow, P.Geo., Exploration Manager, Great Bear Resources Ltd.**

The Dixie Project is located 15 kilometres southeast of Red Lake, Ontario, accessible from Highway 105 via a network of logging roads. At over 22 kilometres long and 9600 hectares, the 100% owned land package lies near the contact between the Uchi and English Sub-provinces, divisions of the Western Superior Province.

Several companies worked the project since the 1940's and with the discovery of significant Gold in drilling at the 88-4 zone (1988) work continued until 2012 with the discovery of multiple other zones. Great Bear began exploration in 2016 with work including re-logging of historical drill core, 3D modelling, airborne geophysics and commencement of diamond drilling in 2017. The results of this work program, led to the identification of a large scale mineralized system which is gold bearing along a tested extent of 2.7 kilometres of strike and remains open at depth and along strike.

Geological interpretation of oriented drill core, airborne geophysics and the limited bedrock exposure suggests that the drill area is within a dominantly mafic volcanic sequence. Recent identification of an ultramafic sequence and a significant geological contact between the western and eastern halves of the Dixie project which could represent a major break separating dominantly felsic and intermediate rocks to the east (more closely related to the Confederation Greenstone Belt) and mafic to ultramafic units to the west (more consistent with the main Red Lake Greenstone Belt). Structural interpretation identifies three phases of deformation including folding and faulting. Two major regional scale D2 fold axes and fold hinges cross the property and main drill areas, structures that could be considered critical features for localizing gold bearing hydrothermal fluids.

Two styles of gold mineralization are observed at Dixie:

1. Gold associated with silica-sulphide alteration at a Calc-alkaline / tholeiitic basalt contact and metasediment contact (termed the DLZ). While the entire contact is consistently mineralized for over 600 metres, higher grade gold occurs in plunging shoots such as Hole DL-005 which intersected 10.40m of 16.84 g/t Gold, these higher grade shoots are interpreted to occur in steeply plunging zones marked by an intersection lineation between the contact and through-going structures.
2. Gold within red-brown biotite hydrothermal alteration haloes hosted quartz veins within Calc-alkaline basalt (also near a contact with metasediments). This zone termed the Hinge Zone or DHZ is also located near a major D2 Fold hinge and associated with a steeply plunging lineation. DHZ-004 returned 7.0 metres of 68.76 g/t gold from the DHZ.

Great Bear is currently in the midst of a 30,000 metre drill program which will focus on further defining high grade gold zones within key areas of the known mineralization on the property, and will also expand the drilling to other target areas generated from re-evaluation of the regional geological and structural setting.

# CORE SHACK ABSTRACT GUIDE

## GROUP TEN METALS

### PLATINUM GROUP ELEMENT MINERALIZATION ASSOCIATED WITH DISSEMINATED AND SCHLIEREN TYPE CHROMITE: A NEW TYPE OF PGE DEPOSIT IN THE ULTRAMAFIC SERIES OF THE STILLWATER COMPLEX, MONTANA, USA

#### Group Ten Metals

The Stillwater Igneous Complex is a 2.7 Ga layered intrusion, located in south-central Montana. Group Ten Metals is actively exploring a variety of targets within the lower, ultramafic portion of the stratigraphic package. The Chrome Mountain sector in particular is recognized to have a complex structural setting and very likely an attenuated Peridotite Zone stratigraphy, as compared to the better-known, eastern part of the Complex. Specifically, the repetitive cyclic units (chromitite-dunite-peridotite -pyroxenite) famously described by Jackson in the early 1960's from the Stillwater Valley sector are rarely encountered.

In addition to better known "reef type" targets (A-B chromitites) and "contact type" targets associated with the Basal Series, exploration conducted by predecessor companies during the 2007 and 2008 field seasons resulted in discovery of a previously-unrecognized style of disseminated PGE occurrence on the southeastern flank of Chrome Mountain, well within the Ultramafic Series. Discovery holes were targeted based on a broadly distributed PGE-in-soil anomaly, located well to the south of, and down-section of, the JM Reef which is currently being mined by Sibanye-Stillwater.

Re-logging of surviving drill core splits demonstrates that broad intervals of highly anomalous levels of Pt+Pd (eg 1.02 g/t Au+Pd+Pt over 116.7m) are associated with disseminated and schlieren type chromite. Host rocks are complexly-textured mixes of pyroxene-cumulate and olivine-cumulate rocks which have provisionally been binned together as hitherto unrecognized magmatic breccias. Pegmatoidal textures, increased abundances of intercumulus plagioclase, and trace amounts of base metal sulfide (po, cpy) are ubiquitous. Finally, mineralized intercepts are spatially associated with demonstrably discordant dunite masses which themselves contain PGE-bearing chromite lenses.

In 2018, mapping and rock chip sampling targeted the discovery area and was successful in extending this anomalous lithologic package and associated PGE mineralization over one kilometer to the east.

We suspect that this occurrence may have similarities to other, unconventional PGE-chromite systems such as seen in the Bushveld Complex (Platreef) and in the Black Thor Intrusive Complex (Black Label Hybrid Zone).

Group Ten land package combines properties formerly divided amongst other companies enabling unprecedented integration of targets, databases, and geologic thinking. The purpose of this core shack presentation is to "re-introduce" an extraordinary and underappreciated discovery. We suspect this is a fundamentally new style of PGE occurrence for the Stillwater Complex.

# CORE SHACK ABSTRACT GUIDE

GT GOLD CORP.

## SADDLE NORTH: A NEW, LARGE-SCALE, AU-CU-AG PORPHYRY DISCOVERY IN BC'S GOLDEN TRIANGLE

Charles J. Greig, GT Gold Corp.

Reconnaissance drilling in two short holes at the close of the 2017 exploration season achieved GT Gold's Saddle North Porphyry discovery, which was rapidly expanded with step-outs in 2018. Consisting of sheeted vein, vein stockwork and disseminated style Au-Cu-Ag mineralization centered on a tabular monzodiorite intrusion, the Saddle North Porphyry has to date been intersected in 12 core holes along approximately 600 metres of strike and to depths of over 1,100 metres. Logging of core suggests a 50° to 60° SW dip to the intrusive complex, true widths of more than 700 metres, a NNW-SSE trend, and a 70° SW dipping fault at the monzodiorite footwall contact with the Stuhini volcanoclastics.

The Saddle North intrusive complex appears similar lithologically to the nearby Red-Chris porphyry system, though with high-K calc-alkalic rocks predominating. The host intrusion comprises equigranular to crowded hornblende feldspar porphyritic (quartz?) monzodiorite, locally rich in sub-round inclusions, strongly altered by potassic alteration assemblages (magnetite, potassium feldspar, biotite). Phyllic (quartz-sericite-pyrite), and peripheral propylitic (chlorite, epidote, +/- pyrite) assemblages, mainly developed in Upper Triassic lapilli tuff or reworked lapilli tuff (debris flow conglomerate) of intermediate to mafic composition, bound the intrusion.

Assays confirm a correlation between the better grades of mineralization and quartz ± pyrite ± chalcopyrite ± magnetite content, associated with an intense stockwork of +30% quartz veins within the potassically altered zone. Representative intercepts include (hole TTD093) 0.51 g/t Au, 0.30% Cu, 0.93 g/t Ag over 904.12 metres, from 15.00 to 919.12 metres, including 1.02 g/t Au, 0.51% Cu, 1.72 g/t Ag over 363.10 metres from 514.90 to 919.12 metres, estimated 85% true width.

# CORE SHACK ABSTRACT GUIDE

## INDEPENDENCE GOLD CORP.

### 3TS – EPITHERMAL GOLD IN CENTRAL BC

**Kendra A. Johnston, President, Independence Gold Corp.**

The 3Ts Project is 130 km southwest of Vanderhoof and consists of 15 mineral claims totaling 5,200 hectares. The Project was acquired during a staking rush in early 1994 after Larry Diakow (with the BCGS) discovered a mineralized vein that assayed 3.74 g/t gold while mapping Tommy Lake. Exploration work, in the area has continued since that time.

The 3Ts Project is located along the southern margin of the Nechako Uplift, which is a northeast-trending, structurally raised block. The structural uplift provides a window through younger cover rocks to the underlying, regionally extensive, volcanic and sedimentary rocks of the Lower to Middle Jurassic Hazelton Group, and to the Late Jurassic Bowser Lake Group. Eocene volcanic rocks of the Ootsa Lake and Endako groups locally overlie the older rocks. Younger, Miocene olivine basalt of the Chilcotin Group forms rare cappings on hills within the Nechako Uplift.

The mineralized quartz-calcite veins within the 3Ts Project strike north-northwesterly and have sub-vertical dips. These veins formed by open space filling along faults. Vein breccia fragments, crustiform banding and comb structures indicate that the mineralized veins have an epithermal character and formed at a shallow depth.

Independence reported an Inferred Mineral Resource using a 1.0 g/t gold grade cut-off. The current combined NI 43-101 Inferred Resource estimate for the Tommy, Ted and Mint veins is 5,452,000 tonnes grading 2.52 g/t gold and 71.5 g/t silver for 441,000 contained ounces of gold and 12,540,000 contained ounces of silver (Armitage, 2014).

The mineralized Ted and Mint Vein structures are both open at depth, below a crosscutting microdiorite sill. The Tommy Vein is also open along strike to the north. With further drilling, the potential exists to expand the resource at the Ted, Tommy and Mint veins and thereby expand the total gold and silver resource on the 3Ts Project.

# CORE SHACK ABSTRACT GUIDE

## INTEGRA RESOURCES CORP.

### THE DELAMAR GOLD AND SILVER PROJECT: A CLASSIC LS EPITHERMAL SYSTEM IN IDAHO, USA

**E. Max Baker, PhD, Integra Resources Corp.**

The DeLamar and Florida Mountain low-sulfidation epithermal Au-Ag deposit are situated within the Owyhee Mountains (SW Idaho) near the east margin of the mid-Miocene Columbia River Basalt Province and the west margin of the Snake River Plain. The Owyhee Mountains comprise a major mid-Miocene eruptive center, generally composed of Miocene basalt flows intruded and overlain by mid-Miocene rhyolite dykes, flow-domes and tuff, overlying the Late Cretaceous Idaho Batholith. The DeLamar mineralization is hosted within a rhyolite flow-dome complex comprising four north-northwest trending vein zones associated with a complex clay-illite-pyrite-adularia alteration assemblage. Florida Mountain comprises a 1,500 m long near-vertical north-northwest trending vein system with a vertical extent of over 400 m. The bulk of historic mining at Florida Mountain occurred on high-grade vein hosted in the Idaho Batholith.

High-grade veins were mined underground from the 1860s to the 1910s, with historical production of approximately 800,000 ounces of gold and 50 million ounces of silver, at an average grade of plus 30 g/t Au. From the 1970s to 1990s, an additional 800,000 ounces of gold and 50 million ounces of silver were produced through open-pit mining and milling that focused on the high-level stockwork vein mineralization hosted within the rhyolite flow-domes at both DeLamar and Florida Mountain.

Integra's exploration drill program (20,000 m) for 2018 focused on upgrading and growing the existing +2M oz. Au and +100M oz. Ag. Brownfields exploration consisting of geological mapping and sampling, along with an extensive IP and soil geochemistry sampling program, resulted in a potential 900 m extension of known mineralization to the SE of DeLamar and a similar zone to the north of Henrietta. Integra also initiated reconnaissance exploration, focusing on the NW extension of the DeLamar structure where sinters and high-level epithermal veining have been traced for more than 5 km to the northwest of DeLamar along the regional scale structure which controls the mineralization at DeLamar.

# CORE SHACK ABSTRACT GUIDE

JAXON MINING INC.

## RED SPRING PROJECT: GOLD-BEARING TOURMALINE BRECCIA MINERALIZATION IN NORTHWESTERN BRITISH COLUMBIA

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**Tony Guo, Jaxon Mining Inc.**

Located in northwestern BC, the Red Spring Project contains porphyry-related, sedimentary-hosted gold-bearing tourmaline breccia mineralization with associated cobalt, copper and antimony. It is a new discovery for this type of mineralization in BC.

Tourmaline breccia mineralization in the “Backbone” area of the Red Spring Project is partially controlled by a low angle thrust fault occurring as sill-like tourmaline-sulfide zones within the fault and along bedding planes, and as discordant breccia zones in the hanging wall of the fault. Mineralized intervals display multiple phases of hydrothermal activity accompanied by strong silicification and tourmaline-sulfide mineralization.

Tourmaline-sulfide breccia zones and veins have been found in the Backbone, North Cirque and Northwest Cirque Prospects. At Backbone, breccia mineralization extends over a strike length of 1000 m and is up to 15 m wide on surface. Gold grades from surface channel samples range from 1 g/t to 32 g/t Au, with cobalt and copper grades up to 0.36% and 8.33 % respectively. The 2018 drilling program has confirmed continuity of mineralization over a strike length of 300 m and dip extent of over 100 m from surface channels to the west. Mineralized tourmaline-sulfide breccia zones in drill core extend discontinuously over lengths of more than 30 metres.

Based on the 2018 IP survey and drilling program, Jaxon has identified a deep target for sulfide mineralization. IP anomalies extend from Backbone to North Cirque and Northwest Cirque areas and cover a 2 km<sup>2</sup> area at depths ranging from 350 m to 430 m. Deeper drilling into one of these IP anomalies in the Backbone area intersected multiple thin sulphide mineralized felsic dykes and minor tourmaline-sulphide veining. Mineralization of this type was encountered intermittently over a drill length of up to 80 m in drill hole BB18-05.

# CORE SHACK ABSTRACT GUIDE

## K92 MINING INC.

### THE KORA GOLD-COPPER DEPOSIT, KAINANTU GOLD MINE, EASTERN HIGHLANDS PROVINCE, PAPUA NEW GUINEA

**Chris Muller, Vice President – Exploration, and John Lewins, Chief Executive Officer, K92 Mining Inc.**

The Kora Gold-Copper Deposit is located in the eastern Papuan Mobile Belt of mainland PNG. Quartz-sulphide gold-copper veins at Kora extend laterally over 2.5 km and are typically 3 – 5m wide. The mineralisation style is of the ‘Intrusion-related low sulphidation quartz-sulphide gold-copper vein system’ type. The Papuan Mobile Belt hosts a number of world class epithermal Au (e.g., Porgera) and porphyry Cu/Au (e.g, Ok Tedi, Frieda River, Wafi/Golpu) ore bodies.

On 1st January 2018, the Kora Inferred Resource stood at 1.65 Mozs AuEq, defined from previous surface diamond drilling. In the last 12 months K92 Mining has increased the known resource by over 60%, having defined a Measured and Indicated Resource of almost 400,000 ozs AuEq and Inferred of almost 750,000 ozs AuEq in the northern extension of the deposit. K92 Mining commenced mining of the deposit in October 2017, declared commercial production mining the newly defined northern extension on 1 February 2018 and is on track to produce 42-46,000 ozs AuEq this year. As at 26 June 2018, the Kainantu Mine had a Measured and Indicated Resource of 560,000 ozs AuEq and an Inferred Resource of 2.4 Mozs, with combined average grades of over 12 g/t AuEq.

K92 Mining has an aggressive program of exploration drilling underway and the program has returned extremely exciting results including one of the highest-grade intersections recorded on the TSX this year (KMDD0084: 5.82m @ 486.78g/t Au, 6g/t Ag, 0.16% Cu from 48.30m). The results have allowed the Company to add almost 900,000 ozs AuEq to the resource in the last six months alone.

# CORE SHACK ABSTRACT GUIDE

## KINTAVAR EXPLORATION

### KINTAVAR EXPLORATION – EXPLORING FOR SEDIMENT HOSTED STRATIFORM COPPER MINERALIZATION IN THE GRENVILLE GEOLOGICAL PROVINCE, QUEBEC

**Kiril Mugerma, President & CEO, and Alain Cayer, VP Exploration, Kintavar Exploration**

Sediment hosted stratiform copper mineralization (SCC) have been an important source of copper mining but this type of mineralization has never been identified in the Meso-Proterozoic (~ 1.2 Ga) marble basins in the Grenville geological province in Quebec. Previous exploration activity in the area from the 70’s has associated the mineralization with traditional skarn-type systems but the presence of better infrastructure allowed for more detailed surface work that was able to demonstrate otherwise.

The copper-bearing marbles are siliceous dolomites metamorphosed to amphibolite facies as indicated by olivine and by diopside paragenesis. The stratiform copper levels show at least three phases of Grenvillian folding. Two copper facies are distinguished: a) very finely disseminated chalcocite in a serpentinized olivine marble and phlogopite and b) coarser composite chalcopyrite-bornite grains in diopside-phlogopite rocks ranging from marble to feldspar-diopside rocks. In the region, the end of the Rigolet orogeny, at 0.95 Ga, is accompanied by the Lesueur alkaline intrusion and sodic-calcic hydrothermal activities associated with extensional faults. Chalcopyrite and bornite are sometimes observed with remobilization in post-orogenic scapolite and infill cavities.

The particular folding observed in the area contributes to both presence of the mineralization on surface and providing structural thickening which could make the mineralization amendable to open pit mining.

The project, which covers more than 100 square kilometers is located in the southern portion of Quebec, just north of Mont Laurier in the Upper Gatineau or approximately 4 to 5 hours drive from Montreal. The area of the project is an active forestry region which contributed to the development of local infrastructure such as roads, camps and power.

The mineralization has been so far identified in 3 distinct corridors located approximately 5 to 7 km apart and each one representing up to 10 km of favorable stratigraphy on surface. The project has seen around 10,000 meters of drilling in the last 12 months.

# CORE SHACK ABSTRACT GUIDE

## KUTCHO COPPER CORP.

### KUTCHO PROPERTY: KUROKO-STYLE VMS MINERALIZATION IN THE CASSIAR MOUNTAINS, NORTHERN BRITISH COLUMBIA

**Rob Duncan, & Rory Kutluoglu, Kutcho Copper Corp.**

The Kutcho Property is situated in the Cassiar Mountains of northern British Columbia, 100 km east of the village of Dease Lake. The Lower Triassic Kutcho Formation (bimodal, calcalkaline basaltic andesite or basalt and rhyodacite or rhyolite), which hosts Kuroko-style volcanogenic massive sulphide (VMS) mineralization at Kutcho. Three elongate VMS sulphide deposits have been delineated. These form a linear, shallowly-plunging, west-northwesterly mineralized trend that is 3.6 kilometres long. The Kutcho Main Lens is overlain by felsic tuffs and part of an eroded gabbro sill further west, the Sumac and Esso lenses are overlain by felsic tuffs, gabbro sill, clastic sedimentary rocks and basalt tuffs, a regionally distributed limestone unit and a thick mudstone sequence (Inklin Formation).

The drill core to be displayed this year is comprised of examples of the variation in mineralization in the deposits and a stratigraphic library of the host rocks of the Kutcho Formation and overlying sedimentary rocks of the Inklin Formation. The mineralization styles are sulphide remobilized veins and disseminated mineralization in exhalite, semi-massive, laminated and brecciated massive sulphide horizons. Sulphide mineralogy of the deposit is relatively simple and consists of pyrite, chalcopyrite, sphalerite and bornite, with minor chalcocite, tetrahedrite, diginite, galena, idiaite, hessite and electrum. Gangue minerals include quartz, dolomite, ankerite, sericite, gypsum and anhydrite.

Although assays are still pending, results received to date including some of the core Kutcho will have to display this year are:

- KC18-038-W1 returned 28.00m of 2.09% Cu, 6.1% Zn, 65.8 g/t Ag and 0.82 g/t Au or a CuEq\* of 5.7% at Esso,
- KC18-235 with 15.61m of 2.58% Cu, 3.76% Zn, 56.73g/t Ag and 0.65g/t Au or 5.0% CuEq\* at Main,
- KC18-239 with 18.81m of 1.80% Cu, 1.44% Zn, 30.21g/t Ag and 0.28g/t Au or 2.3% CuEq\* at Main,
- KC18-242 with 21.86m of 1.74% Cu, 2.47% Zn, 37.52g/t Ag and 0.32g/t Au or 3.3% CuEq\* at Main and
- KC18-247 with 10.4m of 3.44% Cu, 3.3% Zn, 48.1g/t Ag and 0.52g/t Au or 5.5% CuEq\* at Main

CuEq calculated using \$2.75/lb Cu, \$1.10/lb Zn, \$17.00/Oz Ag, \$1250/Oz Au

Further details on the project can be found here: <https://www.kutcho.ca/projects/kutcho-project/>

# CORE SHACK ABSTRACT GUIDE

## LIBERTY GOLD CORP

### BLACK PINE: A LARGE CARLIN-STYLE GOLD SYSTEM IN SOUTHERN IDAHO, USA

**Will Lepore, Peter Shabestari, April Barrios and Moira Smith, Liberty Gold Corp**

Black Pine is a Carlin-style, sediment-hosted gold property located in Cassia County, southern Idaho. It is host to a past-producing heap leach gold mine that operated from 1991 through 1998. During this time, it produced approximately 435,000 ounces of gold at a historical grade of 0.7 grams per tonne from seven shallow pits.

In June 2016, Liberty Gold acquired the Black Pine Property from Western Pacific Resource Corporation. The project consists of 402 federal lode claims (~32 km<sup>2</sup>).

There are 1875 historic shallow (average depth of 93 metres) drill holes on the property and a large number have unmined oxide gold intercepts, including: 1.98 g/t Au over 50.3 metres; 2.96 g/t Au over 24.4 metres; and 2.10 g/t Au over 42.7 metres.

Oxide gold is present in historic drill holes, pit walls and outcrop samples and extensive grid soil surveys. The large mineralized footprint covers a 12 square kilometre area. In late 2017, thirteen reverse circulation (RC) holes were drilled from five locations within the target area. The drilling has thus far succeeded in validating historical results adjacent to a historical pit and more importantly, demonstrated exceptional upside beneath the limit of shallow historical drilling, including 77.7 m of 1.49 g/t Au after 39.6 m of 0.58 g/t Au and 15.2 m of 1.10 g/t Au in LBP002.

Mineralization consists of finely disseminated gold hosted in decalcified and jasperoidized calcareous siltstone correlative with the Pennsylvanian Oquirrh Formation. These rocks are present within a system of interleaved, low-angle thrust faults that is well-exposed in many parts of the property. In other areas, the prospective host horizon is believed to be present under the shallow cover of an overlying thrust plate; these areas are significantly underexplored.

# CORE SHACK ABSTRACT GUIDE

## MARATHON GOLD CORPORATION

### MARATHON'S VALENTINE GOLD CAMP: THE LARGEST GOLD DEPOSIT IN EASTERN CANADA WITH 2.7 MILLION OUNCES GOLD (MEASURED AND INDICATED) AND 1.5 MILLION OUNCES GOLD (INFERRED)

**Phillip Walford, CEO and President, and Sherry Dunsworth, SVP, Marathon Gold Corporation**

Marathon Gold Corporation's 100% owned Valentine Gold Camp hosts the largest gold deposit in Eastern Canada with a current global resource of 2,691,400 oz Au at 1.85 grams per tonne (Measured & Indicated) and 1,531,600 oz Au at 1.77 grams per tonne (Inferred). The resource is contained in four near-surface, mainly pit-shell constrained gold deposits which are open along strike and to depth. The deposits, as well as numerous other gold showings within the property, occur proximal to a major deep crustal structure called the Valentine Lake Shear Zone, which juxtaposes Precambrian granitoids of the Valentine Lake Intrusive Suite against the Silurian Rogerson Lake conglomerate. The gold occurs in dominantly shallow-dipping, en-echelon stacked quartz-tourmaline-pyrite veins of variable thicknesses that intrude the Precambrian granitoids and to a lesser extent into the Silurian conglomerate.

The success of Marathon Gold in discovering new gold deposits and occurrences along an 18-kilometer strike length of the Valentine Lake Shear Zone, has sparked a rejuvenation of exploration by numerous other junior companies along this major structural feature which runs for over 400 kilometers through the island of Newfoundland. Our understanding of the depositional model for these classic structurally controlled orogenic-style gold deposits hosted within a NE-SW striking greenstone belt, has led to Marathon Gold's repeated success in discovering new blind gold deposits and showings over the entire strike length of the Valentine Gold Camp. Detailed prospecting and trenching have contributed greatly to the exploration success while various geophysical and geochemical methods have had mixed success in identifying gold mineralization. Our revised PEA released in October, 2018 demonstrates an open-pit production profile of more than 225,000 oz. of gold per year over greater than a 12-year mine life. Ongoing exploration and infill drilling up to 1000 meters depth continues at the Valentine Gold Camp as we focus on discovering new resources, increasing both Measured and Indicated as well as the Inferred resource categories as we advance the property towards a Pre-Feasibility Study.

# CORE SHACK ABSTRACT GUIDE

## MAWSON RESOURCES

### MAWSON RESOURCES' GOLD-COBALT DISCOVERIES AT RAJA AND PALOKAS PROSPECTS, FINLAND

[A Nick Cook and the Mawson Geological Team, Mawson Resources](#)

The Rompas-Rajapalot Project is situated near the Arctic Circle, 40 kilometres west of the city of Rovaniemi, Finland within the Paleoproterozoic Peräpohja Belt. The Raja and Palokas prospects are the two best mineralized coherent sulphidic gold-cobalt prospects discovered to date, with a maiden resource from these two prospects expected to be published prior to release of this abstract.

An example of one of the better grades published to date from Raja Prospect is the following:

- PAL0093 – 33.6 metres @ 9.7 g/t AuEq, 8 g/t Au, 823 ppm Co from 243.0 metres.

A key to the development of the maiden resource has been recent structural, geophysical, stratigraphic and lithogeochemical analysis of the 2018 drill core, where over 16 kilometres was completed in the winter program. Sulphidic host rocks to mineralization vary from micaceous (potassic) to albitic and magnesium-iron rocks to mafic volcanics with possible minor komatiitic flows. A strong structural-stratigraphic control, with mineralization most abundant in fold hinges provides strong down-plunge continuity from the base of the till interface (<10 metres). This control on mineralization is similar to that observed at Homestake, (USA) and Callie, (Australia), two of the most significant Paleoproterozoic gold mines in the world.

The mineralization at Raja and Palokas is magnetic, conductive and displays an induced polarization response. Mawson has conducted significant ground-based geophysical surveys, including fixed loop time domain electromagnetics, gradient array induced polarization/resistivity, detailed magnetics and mise-à-las-masse to demonstrate continuity and inferred extensions to mineralization at Raja to at least double the known extent to date (November 2018).

Gold is present as free grains mostly on sulphide and silicate grain boundaries, in conjunction with a variety of cobalt minerals, including cobaltite, cobalt pentlandite and linnaeite. Metallurgical work is ongoing, but preliminary studies indicate that 95-99% of the gold is recoverable through traditional gravity and cyanidation techniques.

# CORE SHACK ABSTRACT GUIDE

## MIDAS GOLD CORP.

### STIBNITE GOLD PROJECT: INTEGRATION OF MULTIDISCIPLINARY DATASETS AND DEVELOPMENT PLANNING

**Stephen P. Quin, CEO, Midas Gold Corp., and Christopher Dail, Exploration Manager, Midas Gold Idaho, Inc.**

Midas Gold Corp's Stibnite Gold Project, located in the Central Idaho Mineral Belt, is undergoing permitting for development and a feasibility study has been commissioned. Midas and its state, federal and academic research partners have developed new models outlining relationships between structure, alteration, mineralization and various intrusive events. Detrital zircon dating; dating of igneous and metamorphic minerals; and dating of gangue and secondary ore minerals has dramatically changed metallogenic models for the region, district and individual deposits. New data indicate that mineralization spanned a much longer time period than previously recognized. Recent mapping indicates the district lies along a large crustal-scale feature that has been reactivated repeatedly, producing the complex assemblages observed in the District. Differences in age, estimated fluid compositions, temperatures and the resulting alteration and mineralization, show distinct differences between early disseminated sulfide-hosted Au-Ag mineralization, cross cutting breccia-hosted Au-Ag mineralization and later low sulphidation quartz-adularia vein mineralization and subsequent vein- and late-stage breccia hosted Sb-W mineralization.

Application and integration of the results of these studies has impacted the approach to feasibility-level metallurgical testing and flow sheet design as well as a reevaluation of the district's potential for new discoveries.

Recent (2017) in-fill drilling at the Hangar Flats Deposit intercepted high grade Au-Ag-Sb-W mineralization typical of the style and tenor of mineralization mined historically underground in the Meadow Creek Mine in the 1920s-1930s including 14m averaging 4.8g/t Au, 100g/t Ag, 3.3%Sb and 0.2%W within a broader 50m wide zone averaging 3.2g/t Au, 36g/t Ag and 1.2%Sb. At Yellow Pine, the best hole ever reported by Midas Gold intersected 3.2g/t Au, 6.1g/t Ag and 0.3% Sb over 217m, including multiple high-grade Sb intercepts and confirming the new structural model for the Yellow Pine Deposit. Core from these holes will be displayed as part of the core shack.

# CORE SHACK ABSTRACT GUIDE

## MINAURUM GOLD INC.

### ALAMOS SILVER PROJECT: EXPLORATION BRINGS BACK A HISTORICAL MINING DISTRICT TO LIFE

**Steve Maynard, VP Exploration, Minaurum Gold Inc.**

Minaurum Gold’s 16,445-hectare Alamos project in Sonora, Mexico, covers the Alamos mining district, which produced a minimum 120 Moz silver from 1680 until 1930. No systematic modern exploration was conducted in the district until Minaurum’s entry in 2016. Minaurum’s exploration program consists of geological mapping and rock-chip sampling, and drilling.

Minaurum has documented 12 vein zones with a strike length ranging from 0.5km to 1.9km. The first hole drilled into the Europa-Guadalupe zone, hole AL17-007, intersected 8.25 metres grading 1,760 g/t (57 opt) Ag, 1.6% Cu, 1.5% Pb, and 2.6% Zn, including 2.2 metres grading 5,098 g/t (164 opt) Ag, 2.76% Cu, 0.5% Pb, and 1.18% Zn. “Blind” veins were intersected in drill holes holes -007 and -008, confirming the “Piano-Key” model.

The Alamos vein system occupies a 10 x 5 km “footprint” in a complex set of NNE-SSW-trending horsts and grabens cutting limestone, batholithic granodiorite, and andesitic and rhyolitic volcanics. Silver and base metal-bearing epithermal veins are controlled by graben-bounding faults. Additionally, “blind” veins may be present in down-dropped blocks with little or no surface expression. The “Piano-Key Model” refers to this series of parallel elongated fault blocks that are alternately up-and down-thrown. Veins in and on the margins of the high-standing blocks were eroded to expose mineralization. Mineralized levels in veins in the down-thrown blocks were protected from erosion so that only high-level stringer veins are exposed. Stringer veins on surface in down-thrown blocks potentially indicate intact economic veins at depth.

Minaurum will show mineralized core and surface samples from the Alamos project at its display booth.

# CORE SHACK ABSTRACT GUIDE

## MONETA PORCUPINE MINES

### THE GOLDEN HIGHWAY DEPOSIT, ONTARIO: STRUCTURALLY CONTROLLED OROGENIC GOLD MINERALIZATION

Gary O'Connor and Charlie Moore, Moneta Porcupine Mines; Doug MacKenzie, University of Otago, NZ

The Destor Porcupine Fault Zone (DPFZ) in northeastern Ontario, hosts the largest Archean orogenic gold camp in the world and has produced over 75 Moz Au. When combined with the adjacent Larder Lake-Cadillac Fault Zone and associated splays, this region hosts over 200 Moz Au.

The Golden Highway project is located along 12 km of the DPFZ and subparallel splays, 110 km east of Timmins. A new interpretation of the structures that control gold mineralization has recently been completed and these mineralized structures have been identified and confirmed by over 43,000m of new drilling.

The gold deposits in the Golden Highway project are hosted along the contact between ankerite-sericite-pyrite altered Timiskaming age clastic sediments and the southern margin of an ENE trending Banded Iron Formation. The contact is sheared and hosts a series of subparallel stacked quartz-pyrite veins and associated mineralized stockwork zones. The mineralized stockwork zones plunge steeply to the south-west and have widths up to 40 m, strike lengths up to 150 m and extend to depths of over 1,000 m. The associated vein structures also strike SE from the BIF contact and dip steeply to the SW. Vein widths vary between 1.50 m and 10.0 m and are spaced 25m to 30m apart. The veins can be traced for up to 400 m strike length, have been drilled to 1,200 m vertical depth and remain open to depth.

The new geological interpretation is currently being used as the basis of an updated resource estimate, due to be released prior to the end of 2018. The project currently hosts a NI 43-101 indicated resource of 1.1 Moz and inferred resource of 3.2 Moz.

# CORE SHACK ABSTRACT GUIDE

## NIGHTHAWK GOLD CORP

### REALIZING OPPORTUNITY IN AN UNDEREXPLORED ARCHEAN GOLD CAMP – NIGHTHAWK’S INDIN LAKE GOLD PROPERTY

**Michael Byron and William Waychison, Nighthawk Gold Corp.**

Nighthawk Gold Corp. is a Canadian exploration company focused on advancing its Indin Lake Gold Property, a 222,203-acre land package located 200 kilometres north of Yellowknife, Northwest Territories within the Indin Lake Gold Camp.

An Inferred Mineral Resource estimate of 2.61 million oz gold at 1.62 g/t gold is defined at its Colomac Gold Project, but only a limited portion is captured by this 2018 estimate, leaving an underexplored and highly prospective deposit that hosts several newly discovered, high-grade zones, and broad domains of lower-grade mineralization.

Nighthawk’s Colomac model, as confirmed by geochemical drill core studies, is after the Golden Mile deposits, Kalgoorlie, Western Australia; all are hosted by Archean differentiated mafic sills with a more sodic, siliceous, and brittle, upper portion amenable to clean fracturing, fluid transport, and gold deposition. Differentiated mafic intrusions are known to contain significant gold deposits, and Kalgoorlie’s Golden Mile dolerite is one of the world’s largest.

High-grade domains were not recognized at Colomac until Nighthawk’s discovery of Zone 1.5 in 2014. Drilling to-date has extended its near-surface dimensions to upwards of 300 metres long, to a vertical depth of 660 metres, a true width of 30 to 60 metres in the near-surface and upwards of 155 metres at depth, opening vast new areas for exploration. Highlight 2016-18 intersections include 72.65 metres of 5.58 g/t gold, including 17.80 metres of 17.72 g/t gold; and 84.30 m of 2.91 g/t gold, including 24.55 m of 5.05 g/t gold, and 4.25 m of 8.11 g/t gold. The Company has identified similar bodies at Zones 3.5, 3.0, 2.5 and 2.0, and testing other possibilities along strike.

Recent high-grade drill results from gold deposits satellite to Colomac including Damoti Lake, the four Leta Arm deposits and Treasure Island, illustrate the vast unrealized potential of the Indin Lake Gold Camp.

# CORE SHACK ABSTRACT GUIDE

## NORTH ARROW MINERALS

### KIMBERLITES OF THE MELVILLE PENINSULA, NUNAVUT (NAUJAAT AND MEL PROJECTS)

#### Dan Gainer, Diamond Geologist, North Arrow Minerals

The 10,700 ha Naujaat Diamond Project is located on the Rae Isthmus of the southern Melville Peninsula, only 9 km north of the Hamlet of Naujaat (formerly Repulse Bay), Nunavut. The project hosts the 12.5 hectare Q1-4 kimberlite, the largest diamondiferous kimberlite pipe in the eastern Canadian Arctic. Discovered by BHPB Diamonds in 2003, Q1-4 has an Inferred Mineral Resource that is estimated to be 26.1 million carats (assumes 100% recovery) from 48.8 million tonnes, with an average +1 DTC total diamond content of 53.6 carats per hundred tonnes (cpht) extending to a modelled depth of 205 m below surface.

North Arrow is currently halfway through a two-stage delineation drilling and bulk-sampling program intended to better define the kimberlite's shape, geology and diamond grade models. Once completed, North Arrow intends to update the NI 43-101 resource statement down to a depth of 305 m below surface.

Q1-4 is the largest kimberlite within the Naujaat kimberlite cluster. It is interpreted as a complex, steep-sided, diatreme to root-zone kimberlite, comprised of a mixture of volcanoclastic and coherent rock types. Q1-4 consists of five main pipe infills in order from west to east: A48a, A48b, A88, A61 and A28. In addition to the five main kimberlite rock types infilling the pipe, a number of hypabyssal kimberlite dykes have also been discovered throughout the body.

The Mel Diamond Project consists of approximately 56,000 hectares located in southeastern Melville Peninsula, approximately 140 km south of the community of Hall Beach. The property is located within 20 km of tidewater and hosts two target areas (Mel North and Mel South) with anomalous kimberlite indicator mineral ("KIM") abundances in glacial till. Outcrop of diamondiferous kimberlite ML8 was discovered through prospecting in 2017.

During 2018, magnetic surveys over 14 ground grids and 787.5 total metres of drilling lead to the discovery of kimberlite ML345 and extended the diamondiferous kimberlite ML8 by over 170m in strike length; 224 kg of kimberlite collected from ML8 at surface are presently undergoing microdiamond analysis. Processing of 447 till samples collected across the property is also underway and will better define existing and new targets ahead of the 2019 exploration season.

# CORE SHACK ABSTRACT GUIDE

## NULEGACY GOLD CORPORATION

### NULEGACY GOLD CORPORATION: DISCOVERING GOLD IN THE CORTEZ-TREND, NEVADA, USA

**Derick Unger, NuLegacy Gold Corporation**

NuLegacy Gold Corporation has discovered gold mineralization at the Red Hill property in Nevada’s prolific Cortez-trend. To date, exploration activities have identified both Carlin and epithermal styles of gold mineralization at the project.

The Red Hill property encompasses 108 square kilometers (10800 hectares) of land located in Eureka County, Nevada. It straddles the northeast end of the Simpson Park Mountains, in the Cortez segment of the Battle Mountain – Eureka mineral belt, between the Cortez Mountains to the north, and the Roberts Mountains to the south. The project lies on the SE extension of the Cortez mineral trend, directly across the valley from Barrick Gold’s recently discovered Goldrush and Fourmile gold deposits and Barrick’s Cortez operations, where Barrick mines over 1 million ounces of gold annually.

At NuLegacy’s Red Hill property, classic Carlin-type mineralization is present in the central part of the property, where work has identified gold mineralization in Paleozoic sedimentary rocks of the Wenban and Horse Canyon formations; the same host rocks for Barrick’s nearby Goldrush deposit. Additionally, volcanic-hosted low-sulfidation epithermal gold-silver mineralization has also been identified in the western portion of the property. The gold-silver mineralization is typical of the low-sulfidation class of epithermal precious-metal deposits associated with the Northern Nevada rift, which transects the Red Hill property. Other nearby Northern Nevada rift associated epithermal precious-metal deposits include the Fire Creek, Mule Canyon, and Buckhorn deposits.

The year 2019 will be an exciting year for NuLegacy, exploration will focus on expansion of the mineralization discovered by the successful 2018 exploration program and testing additional targets throughout the property.

# CORE SHACK ABSTRACT GUIDE

## OREZONE GOLD CORPORATION

### THE BOMBORÉ GOLD PROJECT IN BURKINA FASO, WEST AFRICA: A LARGE, FREE-DIGGING OXIDE DEPOSIT WITH DEEPER SULPHIDE POTENTIAL

**Pascal F. Marquis, Orezone Gold Corporation**

Orezone Gold Corporation is currently developing the Bomboré Gold Project in Burkina Faso, West Africa, with the first gold pour expected during the fourth quarter of 2020. The deposit has Measured and Indicated gold resources of 4.77 Moz within both free digging oxides and underlying hard rock sulphides. The Company recently released a Definitive Feasibility Study on the development of the Free Digging oxides and is proceeding through detailed engineering with construction scheduled to commence in Q2, 2019.

The Bomboré gold deposits are hosted within a regional shear zone where the Birimian lithologies have been heterogeneously deformed and metasomatized. The top portion of the Birimian basement is weathered to an average vertical depth of about 45 m along the Bomboré Shear Zone, but weathering can be as deep as 105 m, depending on the position with respect to the paleo-drainage and on the local geology.

Although characterised by a large tonnage of low-grade material, recent exploration success has clearly shown that the Bomboré deposits also contain discrete zones of significantly higher-grade material, which have been the focus of the exploration efforts since late 2016. This recent work has shown that these higher-grade zones are spatially associated with a generation of folded granodiorite intrusive, whose distribution is strongly structurally controlled.

# CORE SHACK ABSTRACT GUIDE

## OSISKO METALS INCORPORATED

### THE PINE POINT PROJECT – THE LARGEST HIGH GRADE, OPEN PIT ZINC DEPOSIT IN CANADA

**Robert Wares, Executive Chairman of the Board, Osisko Metals; Gary Woods, Senior Exploration Manager, Bathurst Project, Osisko Metals; and Stanley Clemmer, Chief Geologist, Pine Point Mining Limited, Osisko Metals Incorporated**

The Pine Point zinc-lead deposit, located near the south shore of Great Slave Lake, was first discovered in 1898 and Cominco Ltd. began exploration there as early as 1929, eventually developing and starting mining operations in 1964. Mining ceased in 1988, having produced high quality concentrates from 64 million tonnes of ore grading 7.0% zinc and 3.1% lead.

Pine Point is a Mississippi Valley Type deposit hosted within the Devonian Presqu'Île dolomitized carbonate reef complex. Mineralization is hosted in two deposit styles, semi-concordant tabular deposits and subvertical prismatic deposits, both of which occur in a broad zone of hydrothermal dolomitization. The tabular deposits are hosted in two channel-like zones along NE-striking back reef and fore reef trends. The prismatic deposits are vertical breccia zones that extend up into overlying stratigraphy. Sulphide mineralization is simple with colloform to crystalline sphalerite and lesser galena, in a gangue of dolomite, calcite and minor marcasite.

Osisko Metals acquired the project in February 2018 and on December 6, 2018 released its maiden NI43-101 pit-constrained Inferred Mineral Resource Estimate (IMRE). The IMRE stands at 38.4 Mt grading 4.58% zinc and 1.85% lead (6.58% ZqEq), equating to 3.9 Blbs. of zinc and 1.6 Blbs. of lead at a cut-off grade of about 1.80% ZnEq. The pit-constrained resource is based on Whittle-optimized pit shells using a zinc price of US\$1.10/lb and a lead price of US\$0.90/lb. The IMRE is divided into five geographic zones and incorporates 42 new pits and 2 historical pit expansions. Pine Point's main core (East Mill, Central and North Zones) contains approximately 23.4 Mt grading 6.30% ZnEq. At the deposit scale, the grade and tonnage show little variability at lower cut-off grades. Resource expansion in 2019 will occur through exploration and the acquisition of new historical deposits.

# CORE SHACK ABSTRACT GUIDE

## OSISKO MINING INC.

### WINDFALL LAKE GOLD PROJECT

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**Mathieu Savard, P.Geo., Vice-President Exploration Québec, and Louis Grenier, P.Geo., Project Manager, Osisko Mining Inc.**

The Windfall Lake Gold Project is an intrusion-associated gold deposit located approximately 200 kilometres northeast of Val-d'Or, Abitibi, Quebec. The property occurs within the Urban-Barry Greenstone Belt located in the eastern part of the Abitibi Subprovince, in the Superior Craton.

The Windfall Lake deposit occurs in an ENE-oriented corridor within the east-west Urban-Barry belt that extends over 135 kilometres and is up to 20 kilometres wide. Within that corridor, weakly deformed tholeiitic volcanic rocks (~2718 Ma) dominated by andesites and dacites are intruded by three generations of northeast to east-trending calc-alkalic porphyry dikes and plugs (~2697-2698 Ma). Folding and faulting created a regional trans-tensional event playing an important role in the emplacement of the porphyritic intrusions. The intrusions are intimately associated in space and time with the gold mineralization.

Since 2015, Osisko Mining drill more than 700,000 metres on the Windfall Project. The drilling program allows a better understanding of the extent of the gold mineralization within the main zone associated with the contact between the hosting tholeiitic volcanic rocks with the cross-cutting granodioritic dikes. It also provides a better understanding of the controls of the mineralization in the Lynx and Underdog zones.

Moreover, the drilling program also resulted in the discovery of the Triple 8 zone that will be exhibited at the core shack. Triple 8 mineralization consists of up to 30% disseminated pyrite and pyrite stringers with local visible gold. The mineralization is hosted in altered andesite, with locally pervasive grey silicification and sericitization. This appears to be a new style of mineralization at Windfall, as mineralizing fluids followed flow contacts inside the andesite host rather than felsic intrusive contacts.

# CORE SHACK ABSTRACT GUIDE

## PAN GLOBAL RESOURCES INC.

### GEOLOGY AND MINERALIZATION OF THE AGUILAS PROJECT, SOUTHWEST SPAIN

**Tim Moody, CEO, and Jim Royall, VP Exploration, Pan Global Resources**

Exploration by Pan Global Resources at its Aguilas Project in Spain, is targeting high-level IOCG style copper and lead-zinc-silver in major faults in the Los Pedroches Batholith. Whilst Spain has a long history of mining and exploration for lead-silver vein type mineralisation, exploration for hematite-dominant IOCG style copper is a relatively new concept.

The ca. 308 to 314 Ma Hercynian, Pedroches Batholith is a composite granitic-granodioritic body extending WNW-ESE for approximately 250 km and up to 30 km wide. An acid to basic dyke complex follows the axis of the batholith. The batholith intrudes folded Palaeozoic meta-sediments along a deep structural zone near the boundary of the Central Iberia Zone and Ossa Morena Zone. The igneous rocks have crustal and mantle chemistries.

Age dates for clay minerals in and adjacent to the Pedroches Batholith show multiple hydrothermal events from 119-285 Ma. The main event is during the Triassic, from 210 to 230 Ma, coincident with break-up of Pangea. Age dates for clays associated with lead-silver are mainly 210-225 Ma, whilst the only available date for a copper deposit in the batholith is ca.  $211 \pm 2$  Ma.

The geological setting in the Pedroches Batholith is favourable for IOCG style copper, including numerous copper occurrences, deep fault architecture, repeated periods of extension/trans-tensional tectonism coinciding with emplacement of the batholith, hydrothermal activity and high heat flow.

Exploration in the Aguilas Project has identified copper in NE trending faults associated with multi-stage breccias and strong hematite alteration. A broad zone of sericite alteration with increasing hematite and fracturing/veins surrounds the breccia. The alteration and style of mineralisation shares features in common with other hematite-dominant IOCG ore deposits, such as Olympic Dam in Australia. In contrast, the WNW trending Zumajo structure hosts lead-zinc-silver in breccia and quartz-carbonate veins and lacks appreciable hematite alteration.

# CORE SHACK ABSTRACT GUIDE

## POLARX LIMITED

### THE ZACKLY CU-AU-AG SKARN DEPOSIT: HIGH-GRADE INTRUSION RELATED MINERALIZATION IN CENTRAL ALASKA, USA

**Frazer Tabcart, Managing Director, PolarX Limited**

The Zackly Cu-Au Skarn deposit is located in the Valdez Creek Mining District in the Central Alaska Range about 250 km (186 mi) north-east of Anchorage. The geology of the Zackly prospect is dominated by rocks of the Triassic Nikolai greenstone consisting of a lower unit of submarine pillow basalts and minor sediments overlain by subaerial amygdaloidal basalt flows, which are in turn overlain by limestones and shales.

The Zackly Limestone occurs in the centre of the prospect and consists of a large WNW trending wedge, bounded by structurally modified depositional contacts of coeval andesitic to basaltic volcanic rocks. Post-Triassic intrusions at Zackly consist primarily of Cretaceous quartz-monzonite to diorite composite plutonic rocks. Contact metamorphism and associated alteration has affected all the rocks near the intrusive contacts at Zackly. Both exoskarn in limestone/marble and endoskarn in intrusive rocks and volcanic rocks are present.

Multiple phases of copper mineralization and associated skarn alteration were observed, including bornite, chalcocite and covellite plus disseminations and stringers of native copper. Occasional coarse gold was also observed within the cores.

An initial mineralizing event occurred when the diorite intrusion formed marbles and weakly mineralized skarns in the adjacent silty-limestones and volcanic rocks, introducing disseminated Fe, Cu and Mo sulfides. A later and stronger overprinting mineralization event introduced widespread garnet-bearing skarns containing clots, veins and disseminations of bornite and chalcocite, and zones of massive magnetite-bornite-chalcocopyrite skarns up to several meters thick. These bodies show progressive replacement of intensely upright folded limey sediments modified by a later penetrative low angle fracture and pressure solution cleavage related to late thrusting.

The presence of porphyry style veins, overprinting potassic alteration containing K-feldspar and secondary biotite, and sub-vertical hydrothermal breccias provide evidence for the possible presence of a blind, proximal porphyritic intrusion, either below the skarn or directly along strike.

# CORE SHACK ABSTRACT GUIDE

## REGULUS RESOURCES INC.

### THE ANTAKORI COPPER-GOLD-SILVER SKARN-PORPHYRY-HIGH-SULPHIDATION EPITHERMAL PROJECT, CAJAMARCA, NORTHERN PERU

**Kevin B. Heather, Hubert Gamarra, John Black and Peru exploration staff, Regulus Resources Inc.**

The AntaKori Project, Cajamarca Province, Peru, continued to deliver outstanding drill results during the 2018 drill campaign. With a NI 43-101 inferred sulphide mineral resource (R0) of 295 Mt @ 0.36 g/t Au, 0.48% Cu and 10 g/t Ag (Wilson, 2012), based on 17,954 m of historical drilling in 70 holes, the current 2017-2018 drilling of ~20,000m will form the basis of an updated resource (R1) expected for Q1 2019.

The project is located within the world-class Au-Cu-Ag belt of northern Peru. It is adjacent to the Tantauatay high-sulphidation epithermal (HS) Au mine (Compañía Minera Coimolache, Buenaventura-Southern Peru); 7 km NW of the Cerro Corona porphyry Cu-Au mine (Gold Fields); and 32 km NW of the Yanacocha HS gold mine (Newmont-Buenaventura).

AntaKori is characterised by calcic-skarn and porphyry-related Cu-Au-Ag mineralization (low As) overprinted by high-sulphidation Cu-Au-Ag mineralization (high As), and by carbonate-base metal Au-Ag-Pb-Zn-Cu mineralization (very low As). Mineralization is principally hosted in prograde and retrograde exoskarn in the Cretaceous Chulec and Inca Formations, as well as in quartz-anhydrite veinlets in quartzites of the Farrat Formation. Skarn mineralization is dominated by magnetite-chalcopyrite-pyrite. Additional mineralization is hosted within breccias and porphyry intrusions. The porphyry system responsible for the skarn mineralization has yet to be discovered, however alteration vectors and geophysical anomalies indicate several targets.

The Cretaceous rocks are locally overlain and cross-cut by Middle Miocene (12.7-13.2 Ma) intermediate to felsic volcanic and subvolcanic rocks of the Tantauatay center of the Calipuy Formation, which hosts HS Au-Ag-Cu mineralization with enargite-tennantite-pyrite. The HS mineralization partially overprinted the skarn along the southwest side of the property. The system is, in turn, locally overprinted by younger, carbonate-base metal Au-Ag-Pb-Zn-Cu mineralization related to late stage rhyolite stocks and flow domes of Upper Miocene age (8.7-8.5 Ma).

# CORE SHACK ABSTRACT GUIDE

SABINA GOLD & SILVER CORP.

## EXPLORATION SUCCESSES AT THE BACK RIVER GOLD PROJECT, NUNAVUT, CANADA

Stacie Jones, Angus Campbell and James Maxwell, Sabina Gold & Silver Corp.

The Back River Gold project is a ~7.2M oz iron formation hosted gold district in advanced exploration and early stage development that is located in the Kitikmeot region of Nunavut, approximately 520 km northeast of Yellowknife, Northwest Territories and is 100% owned by Sabina Gold & Silver Corp. At the Back River project, gold is hosted in structurally complex Archean banded iron formations where mineralized zones are focussed in structural corridors within tightly folded, steeply dipping sequences of greywacke, mudstone and interbedded iron formation. Gold is associated with silicification and Fe-silicate development within favourable structures and lithologies, as well as sulphidization of host iron formation units producing pyrrhotite, arsenopyrite, pyrite and locally visible gold.

During 2018, 22,5000 m of exploration diamond drilling was completed, with the majority targeting high impact resource opportunities at Goose with a small additional first stage campaign being completed at the adjacent Boulder property. Significant results from the past year include the discovery of a new, high-grade gold discovery, the Nuvuyak gold zone, occurring approximately one kilometre west of the Goose Main Deposit, and the expansion of the Llama Extension zone which is located 500 m down plunge from the current Llama underground resource.

The newly discovered Nuvuyak deposit is a geological driven discovery and a strong success story in the continued exploration at the Back River Project. Targeting incorporated property scale modelling of a multilayered dataset including geology, geochemistry, and geophysics. Initially tested during the spring drill program, promising results led to the successful vectoring of the discovery drill hole, 18GSE545, that intersected 11.58 g/t Au over 39.50 m. Continued drilling resulted in significant up-plunge extension of the Nuvuyak zone, and intersected a secondary target area that is now marking a possible link between the discovery hole at Nuvuyak and the Goose Main deposit.

See [www.sabinagoldsilver.com](http://www.sabinagoldsilver.com) for additional updates from 2018 and information on Mineral Resource Estimates.

# CORE SHACK ABSTRACT GUIDE

## SABLE RESOURCES LTD.

### MARGARITA PROJECT: A NEW HIGH-GRADE EPITHERMAL SILVER VEIN DISCOVERY IN MEXICO

Terrence Harbort, Ruben Padilla, Luis Arteaga, Sable Resources Ltd.; Miguel Heredia, Gambusino Prospector de México.

The Margarita Project is a high-grade, low-intermediate sulphidation epithermal vein complex located in the Satevó Municipality in Chihuahua State, Mexico, approximately 120 kilometers south west of the state capital of Chihuahua City. Hosted within Eocene-Oligocene andesitic and rhyolitic volcanic rocks of the Sierra Madre Occidental Volcanic Province, Margarita consists of six outcropping veins identified over a strike length of 1,500 meters with individual vein widths varying from 1 to over 12 metres. The Project lies on strike to Sunshine Silver Corp.'s Los Gatos Project, which hosts a 256 million ounces silver-equivalent resource (Pyle, P (2018) Los Gatos Project: Epithermal silver, zinc lead discovery in south Central Chihuahua. Minera Plata Real, Los Gatos Joint Venture Presentation).

Sable Resources Ltd has completed an initial diamond drill program consisting of 12 holes targeting the Margarita Vein, a multi-phase structure hosted in a fault breccia and the main vein of the complex. Results received include; drillhole M-DDH-18-08 with 461.4g/t AgEq over 14.05m from 67.4m to 81.45m including 859.5g/t AgEq over 2m from 73.2m to 75.2m, drillhole M-DDH-18-06 with 514g/t AgEq over 12.4m from 40.95 to 53.35m including 902g/t AgEq over 4.1m from 42.7m to 46.8m, drillhole M-DDH-18-07 with 417g/t over 3.6m from 94.55m to 98.15m including 707g/t over 1m from 95.65m to 96.65m and drillhole M-DDH-18-04 with 462g/t AgEq over 4.25m from 41.5m to 45.75m including 1.5m at 1073g/t AgEq from 42.7m to 44.2m. The first phase of drilling has defined vein continuity for 750m along strike to a depth of 100m. A planned second phase of drilling will test the entire 1500m strike length of the Margarita Vein and test the other 5 parallel veins. Predominantly a high-grade silver deposit, Margarita veins also contains up to 4.5% zinc up to 2.4% lead and up to 3g/t gold hosted in quartz-barite veins and stockwork.

# CORE SHACK ABSTRACT GUIDE

## SERENGETI RESOURCES AND KWANIKA COPPER CORPORATION

### KWANIKA COPPER–GOLD PORPHYRY PROJECT

**Quinn P. Harper, Chief Geologist Project Manager, Kwanika Copper Corporation**

Kwanika is an advanced-stage copper – gold porphyry project located approximately 150 kilometres north of Fort St. James within the Quesnel Trough of north-central British Columbia. Kwanika was discovered by Serengeti Resources in 2006 and is currently undergoing a Pre-Feasibility Study (“PFS”) fully-funded by multinational trading partner POSCO DAEWOO Corporation (“PDC”) through Kwanika Copper Corporation, a private joint-venture company owned by Serengeti (65%) and PDC (35%). Initial drilling results from the 2018 program comprise **514 metres of 0.64% Cu and 0.80 g/t Au (2.15 g/t Au Eq.) including 168 metres of 0.81% Cu and 1.71 g/t Au (3.42 g/t Au Eq.)** from hole K-18-180, grades that were higher than expected within conceptual mining domains defined in a 2017 Preliminary Economic Assessment (published April 2017).

The current PFS is being completed by a best-in-class engineering consortium which is focusing on the high-grade *Central Zone* in order to simplify the project development plan and environmental footprint compared with the PEA. Drilling as part of the PFS was planned to improve resource certainty and potentially expand and uplift resource grade within the *Central Zone*, as well as provide geotechnical and hydrogeological data for detailed engineering design work. An expanded open-pit is in review, which is linked to optimization of the mine development schedule with the overall goal of decreasing initial capital expenditures (“CapEx”).

Diamond drilling since 2006 has defined two mineralised zones at Kwanika, the *Central (Copper – Gold) Zone* and the *South (Copper – Molybdenum – Gold – Silver) Zone*, which lies two kilometres to the south. The foremost *Central Zone* hosts an *indicated* pit-constrained resource of 101.5Mt grading 0.31% copper, 0.32 g/t gold and 0.96 g/t silver, and an additional underground *indicated* resource of 29.7Mt grading 0.34% Cu, 0.36 g/t Au and 1.05 g/t Ag (NI 43-101 Technical Report resource published April 2017). A theoretical mine plan would employ a combined initial open-pit and later underground mining scenario with a total 15-year mine life.

Kwanika is situated in the northern Quesnel Trough, a region host to numerous porphyry copper-gold deposits including Mt. Milligan (Centerra Gold) and Kemess (AuRico Metals). Regional geology in the Kwanika area consists of Late-Triassic- to Early-Jurassic-aged andesitic volcanic rocks intruded by Early-Jurassic monzodiorites and monzonites with the Pinchi and Manson Creek faults on the west and east sides, respectively.

The *Central Zone* deposit is characterized by the presence of two major and several minor intrusive bodies of the multi-phase Hogem Batholith that intrude a succession of andesitic rocks of the Takla Volcanic Group. Hypogene mineralization consists of disseminated chalcopyrite, bornite and pyrite in and around a potassically altered monzonite stock. Where strongly mineralized, the monzonite commonly displays quartz stockwork and hydrothermal brecciation. Highest grades occur within zones of strong to intense texture destructive albite – hematite alteration, commonly occurring at the top of the hypogene mineralized zone. A supergene enrichment blanket is superimposed on the Central Zone hosting prevalent native copper, chalcocite and covellite, and extends to depth beneath unconformably overlying post-mineral sedimentary rocks. The supergene profile ranges from 5 to 70 meters in thickness and extends laterally for up to 500 meters.

# CORE SHACK ABSTRACT GUIDE

The *South Zone* deposit occurs within a fault bound sequence of strongly altered intrusive rocks of alkalic to intermediate composition. This structural corridor is bound by the 'West Fault' to the west, and possibly by a similar fault interpreted to lie along the east boundary of the corridor. Coincident chargeability and resistivity anomalies form a geophysical domain that represents the fault bound South Zone corridor. This variably mineralized domain is 2,900 meters long and up to 500 meters wide.

The Kwanika Pre-Feasibility Study is scheduled for completion mid-2019.

# CORE SHACK ABSTRACT GUIDE

## SILVERCREST METALS INC.

### LAS CHISPAS PROJECT

**Stephany Fier Manager, Exploration & Mining Engineer, SilverCrest Metals Inc.**

SilverCrest Metals has continued to rapidly advance its Las Chispas Project in Sonora, Mexico. The Company is currently on its phase III drilling campaign which is ongoing and is included in the current >90,000m of drilling on site.

The Company is planning to display HQ boxed core with hole and grade labels. The mineralization style observed on the property is epithermal high grade gold/silver veining, as well as stockwork and breccia.

As mentioned above, due to continued success, SilverCrest has expanded its drill program to include infill drilling and is anticipating to release a PEA in Q1 of 2019.

The current stage of the project can be described as a new district discovery with advanced exploration.

The project is a historic high grade gold and silver producer, and at the time of writing this abstract the Company had 175 drill intercepts of greater than 600 gpt AgEq and 20 intercepts >5,000 gpt AgEq.

Recent significant drill hole intersections include intervals from several veins including;

Babicanora Main Vein; BA18-81 intersected 4 m grading 22.83 gpt gold and 1718.8 gpt silver, or 3,431 gpt AgEq, including 2 m of 46.06 gpt gold and 3,342 gpt silver, or 6,796 gpt AgEq.

([http://www.silvercrestmetals.com/news/2018/index.php?content\\_id=345](http://www.silvercrestmetals.com/news/2018/index.php?content_id=345))

Babicanora Norte Vein; BAN18-10 intersected 2 m grading 61.36 gpt gold and 2,833.5 gpt silver, or 7,436 gpt AgEq, including 0.4 m of 305 gpt gold and 13,889.5 gpt silver, or 36,764 gpt AgEq.

([http://www.silvercrestmetals.com/news/2018/index.php?content\\_id=359](http://www.silvercrestmetals.com/news/2018/index.php?content_id=359))

Luigi Vein; LC18-65 intersected 1.5 m of 13.22 gpt gold and 2,006.7 gpt silver or 2,999 gpt AgEq, including 0.4 m grading 39.2 gpt gold and 5,730 gpt silver, or 8,870 gpt AgEq.

([http://www.silvercrestmetals.com/news/2018/index.php?content\\_id=347](http://www.silvercrestmetals.com/news/2018/index.php?content_id=347))

These are some of the highest grades encountered during our most recent drilling campaign. To date, SilverCrest has seen multiple intercepts with Bonanza-style grades.

Lastly, the Las Chispas project is conveniently located within 25-30 km of two existing gold and silver producers, namely First Majestic Silver's Santa Elena Mine and Premier Gold's Mercedes mine.

Furthermore, the Company is very active in strategic, local land acquisitions.

# CORE SHACK ABSTRACT GUIDE

## SKEENA RESOURCES LTD.

### SNIP AND ESKAY CREEK: THE LEGENDS CONTINUE

Ron Nichols and Kelly Earle, Skeena Resources Ltd.

The Golden Triangle of British Columbia has been regaining the popularity it once had. The Eskay Creek and Snip mines, located only 60 km apart, are both legendary mines that have been left dormant for more than 10 years, until now. Skeena recently acquired both mines from Barrick and has been actively advancing them through drilling and development. Skeena has drilled over 25,000 m at Snip from surface and underground and has completed 7,730 m, mostly on the 21A Zone at Eskay Creek.

Eskay Creek was at one time the highest-grade gold mine and fifth largest silver mine by volume in the world. The complexity of the Eskay core with anomalously high Au-Ag grades and intervals of massive stibnite & epithermal minerals makes it a unique VMS-style deposit.

The Snip deposit represents an intrusive related high-grade shear vein system with visible gold found in three distinctive ore types.

#### Snip Sample Drill Results:

- (UG17-027), 74.35 g/t Au over 2.00m
- (UG17-035), 19.26 g/t Au over 11.85m
- (UG17-062), 91.56 g/t Au over 3.82m
- (UG18-097), 12.37 g/t Au over 20.75m
  - including 16.02 g/t Au over 12.25m and 141.50 g/t over 0.51m
- (UG18-110) 13.80 g/t Au over 18.00m
  - including 42.84 g/t Au over 2.90m

#### Eskay Creek Sample Drill Results:

- (SK-18-003), 43.39 g/t AuEq (29.49 g/t Au, 973.01 g/t Ag) over 27.70m
  - including 89.67 g/t AuEq (58.95 g/t Au, 2,150.52 g/t Ag) over 12.15m
- (SK-18-002), 22.27 g/t AuEq (20.31 g/t Au, 137.34 g/t Ag) over 34.85m
  - including 46.94 g/t AuEq (44.52 g/t Au, 169.53 g/t Ag) over 14.90m
- (SK-18-004) 23.45 g/t AuEq (14.02 g/t Au, 707 g/t Ag) over 28.50m
  - including 58.56 g/t AuEq (33.19 g/t Au, 1,903 g/t Ag) over 10.50m

# CORE SHACK ABSTRACT GUIDE

## SOLGOLD PLC.

### THE WORLD-CLASS ALPALA PORPHYRY COPPER-GOLD DEPOSIT AND REGIONAL PROJECTS OF SOLGOLD IN ECUADOR.

Steve Garwin<sup>1,2</sup>, Benn Whistler<sup>1</sup>, Jason Ward<sup>1</sup>, Nick Mather<sup>1</sup>, Santiago Vaca<sup>1</sup>, José Silva<sup>1</sup>, Bayardo Rosero<sup>1</sup>, Alfredo Cruz<sup>1</sup>, Carlos Diaz<sup>1</sup>, Alex Chafra<sup>1</sup>, Santiago Mantilla<sup>1</sup>, Leonardo Aguilar<sup>1</sup>, Meraaj Chand<sup>1</sup>, Alvaro Guachamin<sup>1</sup>, Karla Morales<sup>1</sup>, Chris Connell<sup>1</sup> and Jason Keys<sup>1</sup>. <sup>1</sup>SolGold Plc. and <sup>2</sup>Steven L Garwin Pty. Ltd.

The Eocene Alpala porphyry copper-gold deposit is a recent discovery in northern Ecuador. The deposit lies within the Cascabel Project which is about 100 km north of Quito, the capital of Ecuador. Northern Ecuador lies within the under-explored northern section of the richly endowed Andean Copper Belt, which extends from Chile in the south to Colombia in the north.

The Cascabel concession consists of a single 50 km<sup>2</sup> claim, licensed for advanced exploration by the Ecuador Government. The concession is controlled by Exploraciones Novomining S.A. (ENSA), which is owned by SolGold Plc. (85%) and Cornerstone Capital Resources (15%).

SolGold has completed over 160,000 m of diamond drilling on the program as of November 2018. This has been accomplished with a workforce of up to 450 Ecuadorean workers and geoscientists, and 6 expatriate Australian geoscientists. The 2019 drilling campaign will focus on further expansion of the existing resource base at Alpala, namely high priority drill targets at Alpala SE, Alpala NW, Trivinio and Alpala Western Limb.

The recent resource estimate (20 November, 2018) for Alpala contains 2.95 Bt at 0.52% copper-equivalent (10.9 Mt Cu, 23.2 Moz Au, 79% Indicated) at a cut-off of 0.2% CuEq, which includes 420 Mt at 1.47% CuEq (3.8 Mt Cu, 12.3 Moz Au, 97% Indicated) at a cut-off of 0.9% CuEq. At a 0.45% CuEq cut-off, the deposit contains 960 Mt at 0.97% CuEq (6.1 Mt Cu, 16.2 Moz Au). There is strong potential for growth, with the 2019 drilling campaign to focus on expanding the resource by drilling to the northwest, northeast, southeast and up-dip.

SolGold is largest and most active explorer of copper and gold projects across Ecuador, holding 72 concessions for a total of 3,250 km<sup>2</sup>. The Company has delineated eleven high-priority, porphyry Cu-Au and epithermal Au-Ag targets, several of which are drill-ready.

# CORE SHACK ABSTRACT GUIDE

## SPHINX RESOURCES LTD.

### SPHINX RESOURCES LTD.—SUCCESSFULLY GENERATING ZINC PROJECTS IN QUEBEC

#### Normand Champigny and Michel Gauthier, Sphinx Resources Ltd.

Sphinx Resources Ltd. (“Sphinx”) is a TSX-V listed company with a strategic goal of discovering zinc deposits in highly prospective terranes in Quebec. Sphinx’s team includes mine finders with a record of success in Quebec/Labrador. Three selection criteria are applied to identify projects: i) good social acceptability, ii) low cost exploration, and iii) high grade metamorphic terranes.

The Ziac district (the “Ziac”) is a new, and emerging, zinc-lead-silver-gold district located in the Pontiac region in southwestern Quebec. The Ziac district is a 40-km long, northwest trending, corridor defined by unexplored zinc-bearing dolomitic marbles typical of the Balm at-Edwards-Pierrepoint zinc district, in New York State. The Ziac covers the Calumet-Sud zinc project in partnership with SOQUEM immediately south of the former New Calumet mine (production of 3.8 million metric tonnes at a grade of 5.8% Zn, 1.6% Pb, 65 g/t Ag et 0.4 g/t Au from 1944 to 1968).

Since the discovery of zinc mineralization at surface in 2014, the exploration work, including diamond drilling, revealed the presence of at least two laterally continuous zinc-bearing horizons characterized by the presence of sphalerite. This mineralization is of the SEDEX-type. The zinc mineralization is defined by the presence of massive sphalerite bands ranging from one centimetre to several centimetres in thickness, as well as disseminated sphalerite, pyrite and pyrrhotite, all hosted in dolomitic marble occurring over zones measuring up to 9 m thick.

Recent trench sampling work extended up to 1,500 m north of the mineralized area with grades greater than one percent and up to 21.2% Zn. A concentration of zinc mineralization in isoclinal fold hinges is observed in several trenches. Geological mapping of sampled trenches suggests that zinc mineralization is continuous between them.

# CORE SHACK ABSTRACT GUIDE

## SUN METALS

### STARDUST: A MODERN APPROACH TO EXPLORATION AT A HISTORIC CARBONATE-REPLACEMENT DEPOSIT IN NORTHERN BRITISH COLUMBIA

Ian Neill, Vice President Exploration, and Tyler Caswell, Project Manager, Sun Metals

The Stardust project, located in northern British Columbia, has a long history of exploration dating back to its initial discovery in the 1940's. Hosted in the Cache Creek terrane directly west of the Pinchi Fault, the project consists of a full suite of Carbonate replacement style mineralization located proximal to the Eocene aged Glover stock.

Historic exploration traced distal epithermal style vein mineralization along trend to lead zinc manto style mineralization before the Canyon Creek skarn zone was discovered within interbedded phyllites and limestones directly east of the Glover stock. This work has left a rich history of exploration data to build upon.

Review of the historic work and compilation of historic data using modern methods, along with new geochemical and geophysical techniques have allowed the Sun Metals exploration team to build on the work of past explorers and target new and unrecognized areas of potential mineralization. In 2018, Sun Metals conducted an initial exploration program at Stardust which comprised an integrated geological, geochemical and geophysical effort to identify "new discovery" areas and "zone expansion" areas. This work led to the targeting of DDH18-SD-421, Sun Metals best intersection from the 2018 program which returned grades of 4.99% Cu equivalent over 100m within limestone beneath the phyllitic package.

Core displayed from hole DDH18-SD-421 shows multiple mineralizing events with suphides replacing prograde garnet skarn alteration with sections of massive chalcoppyrite, massive sphalerite, and coarse crystalline pyrite.

# CORE SHACK ABSTRACT GUIDE

## TERANGA GOLD CORPORATION

### GOLDEN HILL, BURKINA FASO – MULTIPLE ADVANCED PROSPECTS

**David Mallo, Zombo Daouda**

Teranga Gold Corporation’s (“Teranga”) Golden Hill property is comprised of three adjacent exploration permits covering 470 km<sup>2</sup> in southwest Burkina Faso in the central part of the Houndé Greenstone Belt. This belt hosts several high-grade gold discoveries, including the Siou, Yaramoko and Houndé deposits, the latter being contiguous with Golden Hill.

Teranga’s initial exploration program at Golden Hill began in late 2016. To date, in excess of 650 RC and DD holes have been completed. An initial resource estimate is planned for early 2019 and preliminary metallurgical test work programs are underway.

Of six advanced drill prospects, the most extensively drilled thus far are the Ma Structural Complex, Jackhammer Hill and C-Zone/Peksou.

Gold mineralization throughout all prospects at Golden Hill is influenced and controlled by structure and less so by hosting geology. Mineralization is both volcanic-hosted and intrusive-hosted. We commonly observe the same mineralized structures crosscutting both stratigraphic hosts while displaying excellent continuity and correlation within and extensional to both. Many of the mineralized structures observed tend to have a brecciated component centrally located within the broader altered and mineralized host structures. All brecciated textures carry gold mineralization.

Of further interest, during exploration, are cross-cutting and oblique structures propagating from the primary northeast regional trend. Teranga’s exploration effort is focused on drilling all primary structural trends and structural intersections.

Exploration methodology at Golden Hill includes stream sediment BLEG analysis with detailed regolith interpretation, soil geochemical sampling programs, geological/structural mapping, auger and RAB drilling evaluations followed by grid based RC and DDH drill programs.

# CORE SHACK ABSTRACT GUIDE

## TINKA RESOURCES

### AYAWILCA ZINC AND TIN CARBONATE-REPLACEMENT DEPOSIT, PERU

**Dr. Graham Carman and Alvaro Fernandez-Baca, Tinka Resources**

Ayawilca is located 250 kilometres northeast of Lima in the central Peru Andes at elevations of between 3,800 and 4,300 metres.

Zinc mineralization occurs at depths of 120-400 metres as flat-lying sulphide “mantos”, typically 5-30 metres thick. At West and South Ayawilca, mantos are stacked and can be mineralized continuously over vertical thicknesses up to 150 metres. Zinc occurs in the sulphide form as high-iron sphalerite (“marmatite”) with lesser low-iron sphalerite accompanied by pyrite, pyrrhotite, and/or magnetite with minor galena, arsenopyrite, and chalcopyrite. Zinc is typically accompanied by indium.

Zinc mineralization is predominantly hosted by Pucará Group limestone, a Triassic-Jurassic formation. The Pucara limestone is overlain by 120-400 metres of flat-lying, Cretaceous age Goyllarisguizga sandstones that acted as an impermeable seal at the time of formation. The sandstones can be mineralized at or near the contact with limestone and also host steeply dipping zinc-rich veins. Mineralization is interpreted as Miocene age (10-15 million years), associated with an unidentified intrusion at depth.

Ayawilca has an Indicated resource of 11.7Mt grading 6.9% Zn, 0.16% Pb, 84 g/t In, and 15 g/t Ag and an Inferred resource of 45.0Mt grading 5.6% Zn, 0.23% Pb, 67 g/t In, and 17 g/t Ag.

Ayawilca also has a separate tin resource (14.5Mt grading 0.63% Sn with 0.21% Cu and 18 g/t Ag). Tin mineralization slightly pre-dates zinc mineralization and occurs in 10-15 metre thick, flat-lying, pyrrhotite-rich sulphide mantos, near the contact of the limestone with the underlying phyllite (Paleozoic age Excelsior Formation). Tin also occurs in quartz stockwork veins within the phyllite, together with chalcopyrite and arsenopyrite. Tin mineralization is hosted by the mineral cassiterite, accompanied by pyrrhotite, pyrite and minor chalcopyrite, stannite and arsenopyrite.

Ayawilca has similarities to other large CRDs in central Peru hosted by the Pucará Group, including Cerro de Pasco and Morococha.

# CORE SHACK ABSTRACT GUIDE

TREVALI MINING CORP.

## PERKOA VMS DEPOSIT: A HIGH-GRADE ZINC DEPOSIT IN WEST AFRICA

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**Matthew James, Jake Clark, Trevali Mining Corp.**

Perkoa Zinc Mine is the only base metal mine in Burkina Faso, West Africa, and the only known massive sulphide deposit in the camp. With average grades exceeding 14% Zn, this region represents a premier unexplored, frontier zinc belt.

The Perkoa deposit lies in a felsic to intermediary series of volcanic and volcanoclastic rocks, within the Paleoproterozoic Birimian Supergroup of West Africa. The prospective Birimian-aged rocks in Burkina Faso are the same sequences that are renowned for hosting major gold deposits in Burkina Faso and neighbouring countries. The Perkoa deposit represents the only significant zinc massive sulphide mineralization discovered in the Birimian to date and is associated with a more evolved volcanic sequence than the surrounding region.

Perkoa has been classified as a VMS, yet was overprinted by a skarn formed from the emplacement of an intrusion adjacent to the mineralisation. This has had a direct impact on mineralisation and is one of the major controls on the distribution of high grade zinc ore. Although discovered in the 1970s, modern exploration techniques are only now being applied to the deposit and belt, identifying new VMS systems regionally and new high grade mineralisation at depth.

# CORE SHACK ABSTRACT GUIDE

## TRIUMPH GOLD CORP

### BLUE SKY PORPHYRY: AN EXCITING NEW GOLD-RICH PORPHYRY DISCOVERY ON TRIUMPH GOLD CORP.'S FREEGOLD MOUNTAIN PROPERTY, YUKON

Tony Barresi, Triumph Gold Corp.

In 2017, drilling on the Freegold Mountain property tested the novel idea that a 6 km long soil anomaly was underlain by a broad porphyry-related mineralizing system. Drill core displayed at Roundup in 2018 showed positive tests of that hypothesis including the only intersection that had been made of the Blue Sky Porphyry. Subsequent drilling in 2018 delineated the Blue Sky Porphyry and increased its economic potential by demonstrating high grade mineralization across six new drill holes, e.g. 316 metres grading 1.1 g/t Au, 5.0 g/t Ag, and 0.27% Cu, the longest +1% CuEq intersection of porphyry mineralization ever made in the Yukon Territory. The drill intersections have been a catalyst for Triumph Gold's stock price to double and for garnering the interest of major mining companies. This discovery is a result of progressive and science based exploration, from a new hypothesis in 2016, to drill testing that hypothesis in 2017, and in 2018 making six major intersections of Yukon's highest-grade porphyry.

At Triumph Gold Corp.'s Freegold Mountain Property, the Nucleus epithermal Au, and Revenue diatreme related Au-Ag-Cu-Mo deposits are contained within a six kilometre long multielement soil anomaly. A technical review of the property in 2016 suggested that this anomaly outlines a single large porphyry transitional to epithermal mineralizing system. Drilling in 2017 tested the hypothesis with broad step outs away from the resource areas, and intersected some of the longest high-grade intervals of both porphyry and epithermal style mineralization made on the property. A high-grade gold-rich zone intersected in RVD17-13 (1.08 g/t Au, 6.6 g/t Ag 0.29% Cu, and 0.02% Mo over 57 metres), represented a 350 metre step out east of the Revenue Diatreme. Six drill holes in 2018 intersected the same mineralized body as RVD17-13, delineating a steeply dipping body of strong and continuous mineralization related to stockwork veining, brecciation, and high temperature (potassic) alteration, termed the Blue Sky Porphyry. Within the Blue Sky Porphyry, RVD18-19 intersected 316 metres grading 1.1 g/t Au, 5.0 g/t Ag, 0.27% Cu and 0.02% Mo, including 79.75 metres grading 2.5 g/t Au, 6.9 g/t Ag, 0.38% Cu and 0.02% Mo, making it the longest +1% copper equivalent intersection of porphyry mineralization ever made in the Yukon Territory. The Blue Sky porphyry, combined with other well mineralized bodies, defines a 500 metre long corridor of high-grade porphyry and breccia mineralization that is open along strike and to depth. Paragenetic and geochronological studies indicate that the mineralization throughout the Revenue-Nucleus-Blue-Sky area is 75 Ma, but it is hosted in 105 Ma or older rock, suggesting that the causative intrusion and core of the hydrothermal system has not yet been intersected by drilling. In 2019, with the benefit of data from a new deep penetrating IP-DC-MT survey, Triumph Gold will conduct deep drilling (>1000m) targeting the causative intrusion and hydrothermal core that is responsible for the 6 kilometre long area of near-surface mineralization in the Revenue-Nucleus-Blue Sky area.

Sections of 2018 drill core from the Blue Sky Porphyry will be on display highlighting the syn-mineral paragenetic sequence which includes: 1) early stockwork veining, 2) hydrothermal brecciation, and 3) late quartz-carbonate veining with polymetallic (Cu-Mo-Zn-Pb-Au-Ag-Bi-As) mineralization and abundant visible gold.

# CORE SHACK ABSTRACT GUIDE

## VICTORIA GOLD CORP

### DUBLIN GULCH PROJECT, YUKON

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**Paul Gray, Helena Kuikka**

Victoria Gold's Dublin Gulch gold property is situated in the central Yukon Territory, Canada, approximately 375 kilometers north of the capital city of Whitehorse, and approximately 85 kilometers from the town of Mayo.

The Property covers an area of approximately 555 square kilometers, and is the site of the Company's Eagle Gold Deposit. The Eagle Gold Mine is expected to be Yukon's next operating gold mine and, between the Eagle and Olive deposits, include Proven and Probable Reserves of 2.7 million ounces of gold from 123 million tonnes of ore with a grade of 0.67 grams of gold per tonne, as outlined in a National Instrument 43-101 feasibility study.

A 3-month exploration campaign on Dublin Gulch was executed in 2018, with an initial focus of continued step-out and definition drilling at Olive-Shamrock-Spinach. Additionally, two other first-order targets along the 13 kilometer plus Potato Hills Trend, Bluto and Nugget, saw advanced exploration in the form of access construction, diamond drilling and surface trenches. In addition to their geological potential, these targets are each proximal to Eagle and now accessible by vehicle via a newly constructed network of access trails.

All told, the Spinach, Bluto, Nugget and regional targets tested during the 2018 exploration program combined for 29 diamond drillholes, totaling almost 5,400 meters; over 4,000 meters of mapped surfaces trenches from 38 distinct trenches and approximately 8,500 soil samples.

# CORE SHACK ABSTRACT GUIDE

## WESDOME GOLD MINE

### KIENA DEEP: A NEW HIGH GRADE DISCOVERY IN A PERMITTED MINE

**Michael Michaud, VP Exploration**

The past producing Kiena Mine is a fully permitted, integrated mining and milling infrastructure, which includes a 930 m production shaft and a 2,000 tpd mill, with past production of 1.75 million ounces. In 2013, operations were suspended due to a combination of the declining gold price and lack of developed reserves.

In 2016, Wesdome discovered the Kiena Deep A Zone. Drilling has extended the gold mineralization of the A Zone beyond a 350 metre strike length, and identified a well-defined, moderate plunge of approximately 45 degrees to the SE to the gold mineralization that occurs predominantly along the basalt – chlorite-carbonate schist boundary. Continued 3D modelling of the geology, structure and mineralized quartz veins have increased our understanding and confidence in the up and down plunge potential of the Kiena Deep A Zone that could extend over 1 km along plunge.

The Kiena Deep A Zone is a potential new style of gold mineralization in the Abitibi, or least less recognized style related to a higher degree of metamorphic grade resulting in amphibolitized mafic volcanics.

This new zone of mineralization consists of very high grades with abundant visible gold in Quartz veins provides a new exploration target at the Kiena mine and is already the target of exploration in parallel zones. The average grade of the Kiena Deep A zone based drilling and capped at 1 oz/ton (Abitibi historic capping limit) is ~9 g/t Au, while uncapped, the average grade from drilling averages almost 40 g/t Au. the resource estimate will include a review of the grade capping that would have a significant impact on the average grade of the deposit

Exploration drilling has extended this zone from 150 metres in size to potentially over 1 km in size along plunge and high grades that could become a very substantial gold producer as exploration continues.

# CORE SHACK ABSTRACT GUIDE

## WESTHAVEN VENTURES INC.

### EXPLORING BRITISH COLUMBIA'S NEWEST GOLD BELT

**Peter Fischl, Exploration Manager, Westhaven Ventures Inc.**

The Spences Bridge gold belt (SBGB) is a 110 km northwest-trending belt of intermediate to felsic volcanic rocks dominated by the Cretaceous Spences Bridge Group. These relatively underexplored volcanic rocks are highly prospective for epithermal style gold mineralization. Westhaven has been working on the SBGB since 2011 and has over 35,000 hectares situated within a geological and structural setting similar to other significant epithermal gold-silver systems. It is close to existing transportation and power infrastructure allowing for cost effective exploration.

#### *Shovelnose Gold Property*

The Shovelnose claims cover prospective stratigraphy in the southern SBGB, a 110 km northwest-trending belt of intermediate to felsic volcanic rocks dominated by the Cretaceous Spences Bridge group. These relatively underexplored volcanic rocks are highly prospective for epithermal style gold mineralization. Low-sulphidation epithermal gold quartz veins occur throughout the range of Spences Bridge Group stratigraphy.

There is evidence of a significant mineralized alteration system within the property where float samples grading 119 g/t Au (Gold) and 273 g/t Ag (Silver), veins exposed by trenching grading 66 g/t Au, and wide low-grade alteration zones typical of epithermal gold deposits. Recent drilling in shallower felsic dominant sections of the Spences Bridge Group intersected 17.7 metres (m) of 24.5 g/t Au, including 6.78m of 50.76 g/t Au and, in a separate hole, 1.65m of 175 g/t Au and 249 g/t Ag, including 0.65m of 285 g/t Au and 255 g/t Ag.

Most recent drilling:

- Drill hole SN18-15 returned 46.20 metres (m) of 8.95 g/t gold (Au) and 65.47 g/t silver (Ag), including 5.00m of 14.70 g/t Au and 215.00 g/t Ag.
- SN18-15 is 100 metres southeast of hole SN18-14 which returned 17.77 m's of 24.50 g/t Au and 107.92 g/t Ag.
- The strike length of the South Zone is 700 metres and is open to the east and southeast.

# CORE SHACK ABSTRACT GUIDE

## WHITE GOLD CORP

### 2018 EXPLORATION HIGHLIGHTS – WHITE GOLD & JP ROSS PROPERTIES

#### Jodie Gibson, P.Geo., VP Exploration, White Gold Corp

The White Gold property is located approximately 95 kilometres south of Dawson City, Yukon and consists of 1,835 claims covering approximately 36,265 hectares. The property was previously explored by Underworld Resources from 2007 to 2009 and Kinross Gold from 2010 to 2012 and includes a current mineral resource of 960,970 Indicated and 284,250 Inferred ounces of ounces of gold.

Mineralization on the Golden Saddle associated with quartz veining, brecciation, and disseminated to fracture-controlled pyrite and, locally, visible gold within strongly quartz-sericite-illite altered felsic orthogneiss and amphibolite gneiss.

Drilling highlights from 2018 include:

- Hole WHTGS18D0175 intersected 4.6g/t Au over 44.9 metres from 218 metres depth, including 8.57 g/t Au over 17 metres from 223 metres depth.
- Hole WHTGS18D0193 intersected 3.95 g/t Au over 68 metres from 210 metres depth, including 5.42 g/t Au over 47.3 metres.

The Vertigo Target is new, road accessible, discovery on the JP Ross property which is comprised of 2,850 quartz claims covering over 57,000 hectares with at least 14 known target areas and numerous placer gold bearing creeks.

To date, at least 12 mineralized structures are recognized on the Vertigo target over a 1500m x 650m area, and consist of W-NW trending, steeply dipping zones of quartz veining, brecciation, and fracture-controlled mineralization with disseminated to vein-controlled pyrite-arsenopyrite-galena and, locally, visible gold mineralization

Drilling highlights from 2018 include:

- Hole JPRVERRAB18-001 intersected 56.25 g/t Au over 3.05m within a broader intercept of 17.34 g/t Au over 10.67 metres from 3.05m depth.
- Hole JPRVERRAB18-011 intersected 45.00 g/t Au over 3.05m from 1.52m depth, within a broader intercept of 9.65 g/t Au over 15.2m.
- Hole JPRVERRAB18-014 intersected 23.44 g/t Au over 24.38m from surface ending in mineralization.

# CORE SHACK ABSTRACT GUIDE

## XANADU MINES

### ZARAA, A NEW CU-AU PORPHYRY DISCOVERY AT THE KHARMAGTAI PROJECT, MONGOLIA

**Mat Brown and Andrew Stewart, Xanadu Mines**

The Kharmagtai Project lies within the Southern Gobi Porphyry Belt, Mongolia, approximately 120km north-northwest of the giant Oyu Tolgoi Cu-Au Porphyry. The Kharmagtai Project contains three existing outcropping copper gold porphyry deposits and exploration has been focused in recent years on targeting additional Cu-Au porphyry deposits within the 64km<sup>2</sup> mining lease.

Zaraa is a blind discovery, beneath some 22m of post mineral sediment. The discovery drill hole (KHDDH462) was targeting a conceptual porphyry generated with geological, geochemical and mineralogical data built up from the surrounding historical drilling. A review of previous drilling identified a diamond drill hole drilled by Asia Gold Corporation in 2011 which contained a broad interval of low-grade Cu-Au mineralization associated with low density porphyry b-veining (1-2 veins/meter). This drill hole was presumably targeting a very large (1km by 0.5km) IP chargeability anomaly beneath shallow cover.

When the downhole geochemical data, b-vein density data, alteration logging and ASD spectral data was combined a compelling picture of a large-scale porphyry deposit emerged, below and southwest of the Asia Gold drill hole. Drill hole KHDDH462 was targeted at this conceptual porphyry target, entered porphyry mineralization at 458m downhole and was terminated within moderate grade porphyry mineralization at 1386.4m due to drill rig capacity. To date five diamond drill holes have been drilled into Zaraa defining a zone of mineralization roughly 1km by 600m by 400m which is open along strike and at depth. Further drilling is planned for 2019. Zaraa represents a significant new discovery with the potential to expand into another giant Cu-Au porphyry like Oyu Tolgoi. All drilling data suggest that mineralization drilled to date is peripheral to a much larger porphyry system.