## 2022 KLIYUL PROGRAM UPDATE

2022-11-15



## **Forward Looking Statements**

This presentation includes certain statements that may be deemed "forward-looking statements". All statements in this presentation, other than statements of historical facts, that address exploration drilling, exploitation activities and events or developments that Pacific Ridge Exploration Ltd. expects to occur, are forward-looking statements. Such statements may be identified in this presentation by the use of words such as 'plans", "will", "expects" and "may" as well as the use of the future or conditional tense. Although Pacific Ridge Exploration Ltd. believes the expectations expressed in such forward-looking statements are based on reasonable assumptions, such statements are not guarantees of future performance and actual results or developments may differ materially from those in the forward-looking statements. Factors that could cause actual results to differ materially from those in forward looking statements include market prices, exploitation and exploration successes, and continued availability of capital and financing and general economic, market or business conditions. Investors are cautioned that any such statements are not guarantees of future performance and actual results or developments may differ materially from those statements are not guarantees and exploration are cautioned that any such statements are not guarantees of future performance and actual results or developments are projected in the forward-looking statements.

Pacific Ridge's disclosure of a technical or scientific nature has been reviewed by Gerald G. Carlson, Ph.D., P.Eng., Executive Chairman of Pacific Ridge, the Qualified Person under the definition of National Instrument 43-101.



## **Drilling Program Completed**

- 2022 Kliyul exploration program ran from July 03<sup>rd</sup> Sept 18<sup>th</sup> based out of an up to 40-person camp (RDP program from same camp)
- 12 drill holes in completed (7,014.7m) with two drill rigs in five target areas
- All 12 drill holes intersected porphyry Cu-Au style mineralization in variable amounts and at different levels of porphyry system in juxtaposed fault blocks along the Valley Fault Trend (VFT) (ENE-WSW)
- Kliyul porphyry system footprint expanded to 1400m E-W x 400m N-S along the VFT
- High resolution heli-borne aeromagnetic and radiometric survey (423 line-km at 75 m line spacing) completed to better resolve broad coincident Kliyul geophysical signature open at depth below 360m.
- IP survey (27 line-km at 200m spacing) completed across four satellite targets (Ginger, Parish Hill, Bap Ridge and M-39 zones) along 6km-long NW-trending corridor
- Safe, professionally run program with Equity Exploration as project manager (10 First Aid level incidents, 24 lost man-hours over 32,840 exposure hours as of Sept 18<sup>th</sup>).



• First Nations Exploration Agreements in place and businesses involved.



## **Kliyul Project History**





## Controlling trends of BC porphyry deposits - examples



## 2022 Drill Targets





### Plan view of drilling targets along Valley Fault Trend - Chargeability and collars layout





## Section view of drilling targets along Valley Fault Trend - Chargeability and collars layout



## 2022 Drill results - plan view





## 2022 Drill Results - cross-section





## Cross section at KMZ with 2021 assay results





## Selected drill core photos







КС



- A. KLI-22-042@545m -- Mag and K-feldspar altered volcanic. Gen-2 qtz-mag veins. Chl-ser-epi-py retrograde overprint.
- **B.** KLI-22-042@569m -- Qtz-mag-cpy vein with relict grey K-feldspar ± albite alteration halo. QSP and epi-py vein overprint. Anhydrite vein latest.
- **C.** KLI-22-043@215m -- Up to 5% disseminated cpy in volcaniclastic. Non-mag. Chl-ser retrograde overprint of relict potassic alteration.

## Evolving Understanding of the KMZ in Detail

- Mineralization at KMZ appears to be temporally-genetically linked to a WNW- to NW-striking, sub-vertically to steeply NE-dipping series of dioritic porphyry dykes, within a ~300 x 500m dyke complex of early-, intermediate-and late-mineral intrusions.
- The dioritic nature of causative intrusions may explain the lesser or relict volume of K-feldspar within the potassic alteration-mineralization assemblage (magnetite-quartz-chlorite/biotite), similar as Kemess.
- Post-mineral faulting along Valley, Lui and Divide Lake faults appears to have preserved higher level chlorite-sericite alteration to the north (Kliyul North), SW (Kliyul West) and east (Kliyul East) of KMZ respectively. Vertical depth to mineralization is likely to be in excess of 500m. Current DCIP data being used for targeting extends to 360m depth.







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## Kliyul Deposit Geophysical Characteristics and 2022 Update



#### Expansion of geophysical footprint beyond KMZ

• Coincident aeromagnetic (1), K/eTh radiometric (2), resistivity (3, 5) and chargeability (4, 6) signature over a 1,500 m x 800 m area to 360 m depth.



## Analog porphyry systems and models to Kliyul

- Far Southeast Porphyry (Gold Fields, LCMP); Calder et al. *Economic Geology,* v. 117, no. 7, pp. 1573–1596
- 891.7 Mt averaging 0.7 g/t Au and 0.5 wt% Cu, equivalent to 19.8 Moz Au and 4.5 Mt Cu.
- Wedge shaped fault intersections as controlling structures
- Paragenetic sequence:
- Stage-1 (potassic): biotite-magnetite alteration with sinuous veins of quartz and anhydrite;
  Kliyul assemblage is mag-qtz ± bio, Ksp, chl (GEN-1, GEN-2 veins Cu-Au mineralization starts in GEN-2)
- Stage-2 (calc-sodic/chlorite-sericite): lavender quartz-anhydrite veins with sericite-chlorite-albite alt halos;

Kliyul assemblage is chl-ser-epi  $\pm$  alb, act, qtz (GEN-3 veins – main Cu-Au mineralizing episode)

Stage-3 (sericitic, aluminosilicate): transition to the base of lithocap, cooling from white-mica stability to aluminosilicate minerals (e.g. pyrophyllite);

Kliyul assemblage is qtz-ser-py (D-veins)



Fig. 2. Plan of lithology at 0-m elevation in the Far Southeast (FSE) porphyry copper system, showing the location of intrusions, fault zones, and the main ore envelope. The position of the breccia bodies (with either felsic or hydrothermal matrix) are plotted at different elevations, illustrating their pipe-like nature and the concentration of igneous and hydrothermal processes at Far Southeast. Underground workings (gray lines) are at 700-m elevation; A-A' and B-B' mark the locations of sections.





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# Analog porphyry systems and models to Kliyul

### Questions...

## Tilted system or multiple porphyry centres at different depths?

- Intermediate sulfidation bornite (high temperature) has been identified in KMZ, East Wedge and Kliyul North suggesting different centres of sulfide zoning
- Sericitic with minor vuggy quartz+clay identified at Kliyul West and Kliyul North - K/eTh lows.
  - Up to the west?
  - Telescoping of late-stage mineralizationalteration in a "barren core" north of KMZ with late-stage breccia types?
  - Are later stage alteration zones Au bearing?

#### What is best geophysical targeting combination?

- · High chargeability with mod-high resistivity?
- Moderate mag with high chargeability?
- High K/eTh with high chargeability?
  - There may not be a single definitive signature and different combinations should be tested.



















- **DS** Darb South
- independent of field orientation and remanence and results in a compact, almost circular anomalies.

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## Kliyul 2022 Mapping Objectives





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## Satellite targets on the Divide Lake Fault Trend -- Ginger

**GINGER – looking north** 





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Parish Hill Skarn – (cpy-bn-mag garnet porphyroblastic marble)

**Bap Ridge** - 1.3km by 0.7km Ag-Zn-Pb +/-Cu-Au soil anomaly 0.1 to 4% Cu-in-rocks in valley bottom Extensive phyllic alteration at surface Anomalous Cu and extensive anhydrite and porphyry-style veining and magnetite alteration in preliminary drilling



## Summary – 10+ Exploration Targets at Kliyul

- · There are two main trends of the Kliyul project
  - Valley Fault Trend (ENE-WSW) 1.5 km long
  - Divide Lake Fault Trend (NW-SE) 6 km long
- Five targets along the Valley Fault Trend include
  - Kliyul West, KMZ, East Wedge, Kliyul East, Kliyul North
- Five targets along the Divide Lake Fault Trend include
  - Ginger, KMZ, Parish Hill, Bap Ridge and M-39
  - Coincident magnetic highs with high K/eTh and outstanding molybdenum (immobile) anomalies along this trend suggests there may be additional target(s) between Bap Ridge and M-39
- Reinterpretation of property-scale faults based on MVI-RTP-1VD magnetics suggests there may be additional targets proximal to the Darb Creek pluton on the west
  - Darb North, Darb South
- Historically, drilling and exploration has focussed on KMZ and to a lesser degree at Ginger and Bap Ridge.





 Analytic signal of the magnetic field is nearly independent of field orientation and remanence and results in a compact, almost circular anomalies.



## 2022 Kliyul Exploration Program Recap

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