The Geology of the Tujuh Bukit Copper-Gold Project
East Java, Indonesia

Strong, Growing and Delivering

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Presentation Topics

Overview
Arc-Setting

Intrepid Mines Exploration

Tumpangpitu Geology / Mineralization

Tujuh Bukit District Opportunities
**OVERVIEW**

- **Intrepid Mines - PT IMN JV Exploration:** 2007 - Present
- **Property:** 11,621.45 Ha, Southeast Java
  2 adjoining IUP’s – IUP Eksplorasi, IUP Operasi & Produksi

**Main Prospect – Tumpangpitu:**
Tonalitic Porphyry Cu-Au-Mo system +
High Sulphidation Cu-Au-Ag Sulphide + Au-Ag Oxide cap

- **4th OXIDE ( + Oxide Transition) Au-Ag Inferred Resource (HS)**
  130Mt @ 0.55 g/t Au, 18 ppm Ag (0.2 g/t Au cut-off) 2.4 MOz Au, 80 MOz Ag
  * Encouraging Column Leach Results – Heap Leach Potential

- **1st & 2nd SULPHIDE Inferred Resource (Porphyry + High-Sulphidation)**
  Nov 2010: 500Mt @ 0.43% Cu, 0.47 g/t Au (0.2% Cu cut-off) 2.1 Mt Cu, 7.6 MOz Au
  May 2011: 990Mt @ 0.40% Cu, 0.45 g/t Au (0.2% Cu or Au cut-off) 4.0 Mt Cu, 14 MOzAu

* Mineralization open on 4 sides and at depth
* Significant areas of Exploration Potential defined marginal to areas of Inferred Resource

**Surrounding Prospects**

- **Katak –** Cu-Au porphyry (5 drill holes)
- **Salakan –** HS epithermal on porphyry Cu-Au (Target)
- **Candrian –** HS epithermal on porphyry Cu-Au-Mo (Target). Drilling in Progress
- **Gunung Manis –** LS epithermal (Target). Drilling in Progress
Location and Access from Denpasar
Southern Mountains Arc

Source: Smyth et.al. 2007
Emerging Fertile Segment of the Deeply Eroded Miocene Sunda Arc

Deposits and major prospects within eroded volcanic remnants of the older Oligocene to Miocene Sunda-Banda Arc.

Arc magmatism migrated northward during the Pliocene to its present position as defined by the axis of juvenile Quaternary volcanic centers.
Bouguer Gravity
East Java

Source: Smyth et.al. 2007
Deeply Eroded Andesitic-Dacitic Volcanic Centre

Gunung Raung

Genteng

Tujuh Bukit Property

Eroded Miocene Volcanic Centre
Permitting and Prospect Locations

Argillic Alteration Envelope
Footprint >40 km²
10km x >5km
Intrepid – IMN Exploration (2007-2011)
* The Tujuh Bukit property was visited by M.Norris and B.Rohrlach in August 2006.

Interest in the property was consequently triggered by:

1. **EXTENSIVE DISTRICT-SCALE ALTERATION** (~40 km²)
   Overlapping large magmatic-hydrothermal systems.

2. **EVIDENCE OF 2 PORPHYRY SYSTEMS** (P.Merah Is. & Salakan)


4. **ENCOURAGING EARLY-STAGE DRILL RESULTS** by GVM and Placer.

5. **FERTILE ARC SEGMENT** – Batu Hijau, Elang.
   Regional geochemical & magnetic data indicating multiple apical stock positions.

Drilling started in September 2007. Initial aim of putting together a Au-Ag oxide resource

As of May, Intrepid Mines have drilled 215 holes at Tujuh Bukit for **74,517 m**:

- **Tumpangpitu Oxide** – 146 holes – 35,250 m
- **Tumpangpitu Porphyry** – 34 holes – 30,330 m
- **Katak Porphyry** – 5 holes – 1,835 m
- **Candrian** - 5 holes – 2,508 m
- **Geotech** – 8 holes – 421 m

**7 drill rigs (Maxidrill)** – Tumpangpitu, Candrian, Gunung Manis
Tumpangpitu Cu-Au-Mo Porphyry System
GT-010  34m @ 2.41 g/t Au-equiv.
GT-011  40m @ 4.31 g/t Au-equiv.
GT-012  48m @ 1.85 g/t Au-equiv.
Lithology Cross-Section 11060 mN

- Coastal Outcropping Sediments dipping 40° NE
- Crystalline Tonalitic Intrusive Breccia and I-GU Mineralised Hydrothermal Breccias
- Medium Grained 'Old' Diorite
- Coarse-grained Tonalite
- GTD 182
  - 604.5m @ 0.34%Cu, 0.34g/t Au
- ZONE A
- ZONE C
- Diatreme breccias cut by Hydrothermal breccias hosting HS Mineralisation
- Cu-Au-Mo Fine-grained Equigranular Tonalite

Lithology Legend:
- DBE Dismembered Breccias
- DBE Dismembered Matrix Breccias
- I-GU Intrusive Breccias
- I-GU Quartz Diorite
- I-GU Quartz Tonalite
- FT Fines Tonalite
- I-GU Muscovite-biotite "Old" Diorite
- I-GU Muscovite-biotite "Old" Slate
- LS Lineaments
- VSN9 Volcanic Sandstone
- RJD Mudstone
- ST Sediments

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Resource Cross-Section 11040 mN

Bounding Limit of Porphyry Sulphide Resource Estimate

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GVM Drill Hole GT-001: An ~80m near miss

GTD-10-163
589.5m @ 0.57 g/t Au, 0.65 % Cu (122 ppm Mo)
GTD-08-29 core (1\textsuperscript{st} Porphyry Intersection)

268m @ 0.47 g/t Au, 0.32% Cu
(incl. 100m @ 1.02 g/t Au, 0.55 % Cu)
Batu Hijau 0.3% and 1% Cu shells

Zone A Oxide

398m @0.77/0.54

Sealevel

Xm @ XAu g/t / XCu %

Batu Hijau 0.3% and 1% Cu shells
Batu Hijau 0.3% and 1% Cu shells

Zone A Oxide

398m @0.77/0.54

589m @0.57/0.65

Sealevel

Batu Hijau 0.3% and 1% Cu shells
Tumpangpitu Au-Ag Oxide System
Soil Au Anomalies and Oxide Zones A-B-C, E-F
High-Sulphidation Oxide Zones

**Main Features of the Oxide Au-Ag “cap”**

- Au + Ag enriched (2-3X).
- Cu totally leached from surface to between 20-300m depth.

Oxide mineralization coincides with NW-trending ridges of leached vuggy silica developed within volcanic breccias.

Surface geochemistry (Au, Ag, As, Sb +/- Pb).
- Zn leached in Adv-Arg zones.

Au grade increases in relation to increasingly Fe-oxide (Limonite-Goethite-Hematite) with increasing fracture intensity.
Zone C – Oxidation Profile and Ag intersections

[Map and data related to mineral exploration and geographic variations]
Looking north to Zone A

GTD-49

487.8m @ 1.77 g/t Au-equiv
(incl. 54m @ 3.04 g/t Au-equiv from 146m)
Zone B Area – Structural Control on HS Lodes and Oxidation Profiles

Zone B
Section 9045370 mN
Alteration

- Propylitic (chlorite-calcite)
- Argillic (clay and clay-silica)
- Advanced Argillic (silica)
- Advanced Argillic (silica-alunite)
Infill Proposed by Hellman & Schofield to upgrade oxide resource from Inferred to Indicated
Oxidised High-Sulphidation Au-Ag Mineralization

GTD-07-17: Rebrecciation of tuffisite breccias
GTD-07-17: Vuggy acid-leached bx
GTD-08-49: Goe-Hem-Lm veins networks
GTD-09-102: Oxidised HS-sulphide bx vein

GTD-08-56: Sphalerite-Barite-Py-Cc bx veins in steep structures below BOCO.

GTD-10-166: Banded Sphalerite-Barite-Py-Cc veins cut by dickite veins.
Diatreme Facies (Zone B region)

GTD-09-60 (93.90m): Accretionary lapilli in milled breccia

GTD-09-88 (~120m): Charcoal wood being cycled downward in a diatreme vent.

GTD-09-107: Muddy-matrix breccias from a high-level diatreme maar lake facies.

GTD-09-65 (108m): Porphyry Qtz-Mt B-veins rucked upward in diatreme mill breccia.

GTD-07-22: Porphyry Qtz stockwork in a clast within advanced -arg altered mill breccia.
Intrepid Gridded Soils (Au and Cu)

4 x 2.5 km Au Soil footprint

4 x 2.5 km Cu Soil footprint
Magnetite Destructive Domains

Subdued magnetic response over lithocaps

Salakan Alteration System

Tumpangpitu Alteration System
Magnetic Stocks and Surrounding Soil Mo responses

Salakan Alteration System

Tumpangpitu Alteration System

Magnetic Batholiths
3D Inversion Model – Tumpangpitu Batholith

Tumpangpitu Porphyry System (Zone A & C)

Tumpangpitu Porphyry Target (Zone B)

Porphyry Cu-Au targets around magnetic apophyses above a deep batholith

Modelled by Moore Geophysics
Drilling, Lithology and Magnetic Inversion Models

3D Inversion model (Intrepid 2009 survey)

3D Inversion model (GVM 1999 dataset)
Tumpangpitu Magnetic Model
Sulphide Resource Block Model (0.7ppm Au cut-off)

Near 1-to-1 Correlation between High-Au and Strong Magnetics
Untested potential to the north
Mo Anomaly Clusters in Soils

Five potential porphyry centers

Tumpangpitu, Katak & S9 show similar close association of Magnetic highs and Soil Mo clusters.

- RTP Magnetic Anomaly
- Soil Mo Cluster
Mo Soil Anomalies Clustered Around Magnetic Highs

- Tumpangpitu
- Katak
- Candrian

Zone D North
KTD-10-002: 0-350.3m
350.3m @ 0.14 g/t Au, 0.16% Cu

KTD-10-001: 168-268m
100m @ 0.45 g/t Au, 0.3% Cu
Salakan Porphyry Prosect

-80# Stream Sediment Cu and Soil Cu
Outcropping Quartz Stockwork

Sulphide-cemented Silica Breccias

Goethite-Hematite Breccias

Reconnaissance Mapping
Thank you (Terima Kasih) to PT Indo Multi Niaga

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