#### **Korean Metals Exploration Pty Ltd**



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# **Corporate Profile**

Korean Metals Exploration Pty Ltd ("KME") has established a portfolio of polymetallic mineral projects in South Korea based on 25 years "in-country" operational exploration expertise. KME is a privately-owned Australian company with a 100% owned Korean subsidiary Shin Han Mine Inc ("Shin Han").

KME offers investors the unique opportunity to quickly convert drill-ready historical resources into JORC Mineral Resources at low exploration risk. KME proposes to raise capital for check-infill drilling, establish JORC Mineral Resources, metallurgical and engineering studies, and complete preliminary economic assessments on historical deposits in the Uiseong, Haman and Goseong projects. KME envisages advancing its projects into production with local domestic Offtake Agreements.



Although the Korean peninsula is a mountainous landscape, an excellent infrastructure network of motorways, tunnels and elevated roads enable rapid commute between the major population centres. KME's projects are all located in the south-east of the Korean peninsula, about 3-5 hours' drive from Seoul.

#### **Gyeongsang Basin**

The KME projects are situated within the Gyeongsang Basin, a back-arc volcano-sedimentary basin that developed near an "Andean-type" continental margin during the Cretaceous, coinciding with the initiation of the migration of the Japan-Kamchatka volcanic arc away from Eurasia. The Gyeongsang Basin was likely adjacent to Kyushu, when "Slab Tear" occurred, followed by "Trench Retreat" of the Japanese Island chain after 100Ma.

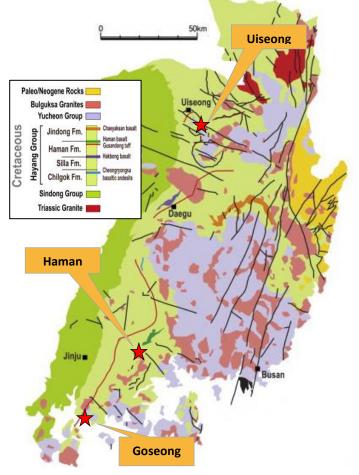
Widespread polymetallic mineralization is present in the Gyeongsang Basin, associated with volcano-sedimentary rocks of the *Yucheon Group* and the co-magmatic I-type igneous intrusions of the *Bulgugsa Series*. Mineralization is consistent with Low- and Intermediate-sulphidation epithermal, chimney-manto skarn and alkalic porphyry Cu-Au deposit styles.

#### **Country Primer**

South Korea is strategically located in the North Asia region and at the eastern gate of China's "One Belt One Road" development zone. South Korea is a member of the G12 Group and classified as a developed, high-income country (GDP per capita of US\$35,000) with the fourth largest economy in Asia and the eleventh largest globally.

South Korea is ranked 5<sup>th</sup> in "*ease of doing business*" globally by the *World Bank (2019)*, has an *S&P Credit Rating* of AA Stable and is rated "Low Sovereign Risk" (*Veririsk Maplecroft, 2018*). South Korea has *Free Trade Agreements* with Australia and Canada.

A highly-skilled workforce in a population of 51.4 million (2017) supports the country's main industries of electronics, telecommunications, automobile production, chemicals and steel production. South Korea is the largest global refiner and exporter of zinc, with major base metal refineries at Onsan and Seokpo.



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## **Uiseong Au-Cu-Zn-Ag-Pb Project**

*Shin Han* holds 10 granted Mining Rights over the historic Dongil, Ogsan, Jeonheung, Kyungwha and Keumdongchilbo mines (within 6km radius) of the Uiseong project.

The historical Dongil Au-Cu-Zn-Ag-Pb prospect is the main Exploration Target for KME, where mineralization consists of at least 3 Vein structures is enclosed by disseminated sulphides and stockworks up to 23m wide. The veins strike NNW over an 1800m long x 300m wide zone, occurring as a sub-parallel sheeted arrangement, with a "chimney" breccia pipe (see rock slab) in the north.

Mineralization is hosted in Cretaceous volcano-sediments (*Sagok Formation*) within a maar-diatreme setting (*Chunsan Formation*), intruded by a rhyodacite lava dome (see photo), "ring dykes" and sills (*Unmunsa Rhyolite*).

The Au-Cu-Zn-Ag-Pb±Sb-Bi-As-In-Cd mineralization is classified as intermediate-sulphidation epithermal style, analogous to the quartz vein, breccia and sediment-hosted deposits of the Zacatecas district of Mexico.



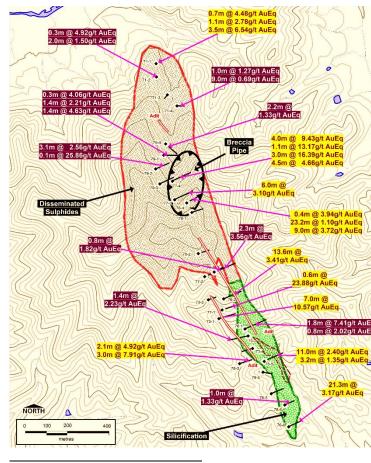
Historical exploration in the Uiseong district by the *Korean Mining Promotion Corporation* ("KMPC") during the 1970-80s included 92 diamond drill holes (14,500m core).

Significant drill intersections were recorded in limited wide-spaced drilling. Using this KMPC data, *Senlac Geological Services Pty Ltd* (2017) estimated an Inferred Mineral Resource/Exploration Target of 20.83Mt @ 1.06g/t Au, 44g/t Ag, 1.10% Cu, 1.63% Pb & 1.12% Zn (see Table below).

## Inferred Mineral Resources and Exploration Targets – Uiseong Project<sup>1</sup>

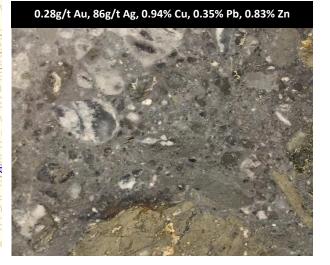
Mine / Deposit	Tonnes (t)	Grade AuEq (g/t)	Grade Au (g/t)	Grade Ag (g/t)	Grade Cu (%)	Grade Pb (%)	Grade Zn (%)
Dongil	9,234,500	4.65	1.19	44	0.96	1.05	1.05
Ogsan	3,006,300	10.61	1.32	61	3.24	3.95	1.60
Kyungwha	4,802,215	3.53	0.25	42	0.66	1.69	0.98
Jeonheung	2,470,655	4.06	1.90	39	0.46	0.67	0.73
Keumdongchilbo	1,320,770	4.03	0.94	35	0.00	2.19	1.85
TOTALS	20,834,440	5.15	1.06	44	1.10	1.63	1.12

NOTES: AuEq was calculated using August 2017 metal prices of Au = US\$1284/oz, Ag = US\$16.94/oz, Cu = US\$2.93/lb.



The above inferred resources/exploration targets have combined contained metals totalling 707,300 ounces gold, 229,000t of copper (500Mlbs), 341,000t of lead, 234,000t of zinc and 30 million ounces silver. The insitu value of the metals is about US\$4.41Billion (approximately US\$212/t using *August 2017 metal prices*), equivalent to 3.4Moz gold at 5.15g/t AuEq.

KME believes there is excellent potential for a central milling facility at Dongil, processing high-grade ores sourced from several satellite deposits within a 6km radius.



<sup>1</sup> Cautionary Statement: These Inferred Mineral Resources were calculated by *Senlac Geological Services Pty Ltd (2017)*. The data is Historical and so does not comply with current NI-43-101 or 2012 JORC Code reporting requirements.

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## Haman Au-Cu-Ag-Co Project

The Haman district is situated in the southern coastal region of the Korean peninsula, approximately 300km southeast of Seoul and was the principal copper and cobalt producing region of South Korea up until the end of World War II. Mining resumed at Jaeilgunbuk during 1963-1975. *Shin Han* holds 11 granted Mining Rights over Haman project, covering the historic Gunbuk, Oguk, Gilgok, Namgok-Bukgok, Manse and Ebisu-Haman mines (all within 4km radius).

Sheeted quartz-carbonate-magnetite-specula hematitetourmaline-sulphide Cu-Au-Ag ± Co-W veins, breccias and stockworks are closely associated with tilted, "pencil"shaped, monzonite porphyry intrusions, emplaced into carbonate-evaporite-bearing siltstones and mudstones (Cretaceous *Haman* and *Jindong Formations*). Alteration consists of a central "calcic potassic" assemblage (albite, biotite, magnetite, k-feldspar), an "inner Potassic" assemblage (magnetite-actinolite-tourmaline and magnetitepyroxene skarn) surrounded by an outer halo of propylitic alteration (epidote-chlorite-carbonate). KME identifies the style of mineralization at Haman as alkalic porphyry Cu-Au.

Historical exploration completed by the KMPC (during 1963-1980) included 93 diamond drill holes (20,076m core). However, only obvious high-grade mineralized veins were selectively assayed by the KMPC and wide intervals of veinlet and disseminated sulphide mineralization was not sampled. Using the available KMPC historical data, *Senlac Geological Services Pty Ltd* (2018) estimated the preliminary Mineral Resources tabulated below:

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Mine / Deposit	Tonnes (t)	Grade AuEq (g/t)	Grade Au (g/t)	Grade Ag (g/t)	Grade Cu (%)	NOTES:			
Gunbuk	2,996,675	7.73	1.89	59	3.27	AuEq was calculated using August 2017			
Oguk	436,535	15.29	7.59	20	4.77	metal prices of:			
Gilgok	620,194	2.73	0.86	10	1.12	Au = US\$1284/oz			
Bukgok-Namgok	1,027,381	0.95	0.25	7	0.39	Ag = US\$16.94/oz			
Dundok	243,787	N/A	N/A	N/A	N/A	Cu = US\$2.93/lb.			
M Vein	949,781	0.77	N/A	N/A	0.49	N/A = No Assay. Gold and Silver were not			
Manse	404,250	11.13	N/A	577	2.26	routinely assayed. No grade is assumed, I			
Ebisu-Haman	868,003	2.20	0.24	11	1.17	significant grades can be expected.			
TOTALS	7.546.556	5.27	1.32	58	2.04				

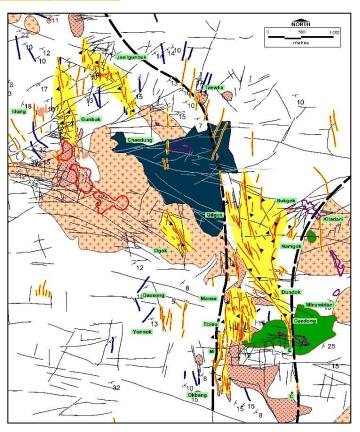
Inferred Mineral Resources and Exploration Targets – Haman Project<sup>2</sup>

The combined Inferred Mineral Resources of the Haman project is 7.55Mt @ 1.32g/t Au, 58g/t Ag & 2.04% Cu. Contained metals are 320,300 ounces gold, 14.2 million ounces silver and 154,000 tonnes copper (340Mlbs). The insitu value (using *August 2017 metal prices*) is about US\$1.64 Billion (approximately US\$218/t), equivalent to 1.3 million ounces gold.

Potential alkalic porphyry Cu-Au style bulk-tonnage Exploration Targets with coincidental magnetic "bullseye" and Self Potential conductor geophysical anomalies are identified at Gunbuk, Jaeilgunbuk, Ogok, Gilgok, and Ebisu.



1.99g/t Au, 9g/t Ag, 1.10% Cu



KME considers there is excellent potential for a continuous vat leach mill located at Gilgok, to recover gold, silver, copper and cobalt metals, sourced from several satellite mining operations within a 3km radius.

<sup>2</sup> Cautionary Statement: These Mineral Resources were estimated by *Senlac Geological Services Pty Ltd* (2016). The data is Historical and so does not comply with current NI-43-101 or 2012 JORC Code reporting requirements.

#### Goseong Au-Cu-Ag-Bi Project

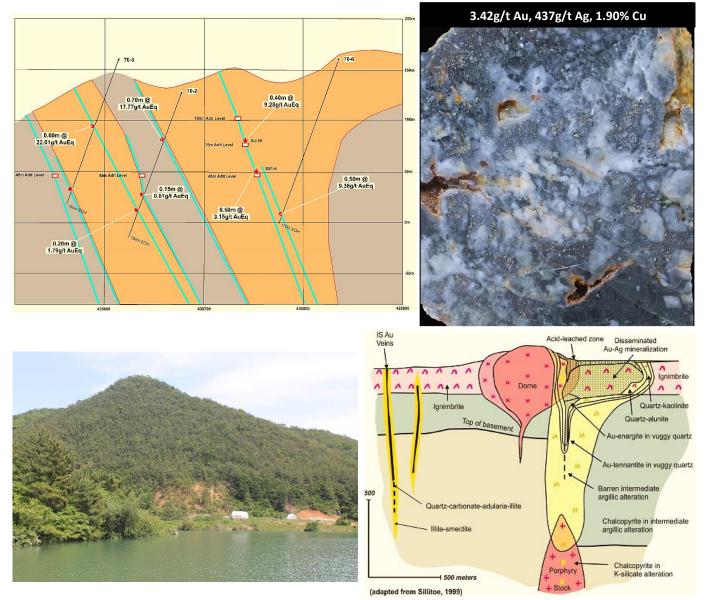
The Goseong mining district, situated in the southern coastal region of the Korean peninsula, was the principal copperproducing region of South Korea from the end of World War II through to 1985. *Shin Han* holds 3 Mining Rights over the Goseong project.

Previous exploration by the KMPC (during 1970-1992) reported combined remaining historical mine reserves<sup>3</sup> based on underground adit rock chip channel sampling at the Jinheung, Samsan-Jaeil, Samsan, Sambong and Buyeong mines of 538,575 tonnes at 6.08% Cu, 1.54g/t Au and 395g/t Ag for contained metals of 33,624t of copper, 30,294oz gold and 6.9Moz silver. These "mine reserves" represent an insitu value (*August 2017 metal prices*) of approximately US\$361 million. Only limited historical drilling was undertaken by the KMPC. Most of the historical underground mine workings are still open and remain accessible for exploration.

Hydrothermal breccias, splays, sheeted veins and stockworks are developed around the main vein structures, suggesting there is bulk tonnage potential at these deposits. Dilated sheeted veins, horsetail splays, dilational jogs and tension veins are likely, with breccias and stockworks expected to form at competent rock contrast-contacts. Chlorite-epidote-specular hematite 'inner propylitic' alteration assemblage is a characteristic feature, along with alunite, jarosite and hematite advanced argillic cap. The Cu-Au-Ag ± Bi-Pb-Zn-As-Co mineralization probably best fits a transitional environment between dome-related intermediate-sulphidation epithermal to deeper alkalic porphyry Cu-Au models (refer below).

K-Channel airborne radiometric anomalies coincide with most of the mine workings. Airborne "bullseye" magnetic and EM geophysical anomalies coincide with a quartz diorite intrusion at Goseong.

High-priority Exploration Targets have been identified at Bonghwasan, Jinheung, Samjeon (see photos of mine and rock slab), Samsan, Seongji and Samsanjaeil South mines (see Drill Section below).



<sup>3</sup> Cautionary Statement: These Mineral Resource estimates were reported by the *Korean Mining Promotion Corporation* (1980-1992). The data is Historical and so does not comply with current NI-43-101 or 2012 JORC Code reporting requirements.

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