Introduction to the Engineer District



ENGINEER GOLD MINES LTD.

EAU:TSX.V

VRIC: JANUARY 2023



Share Structure

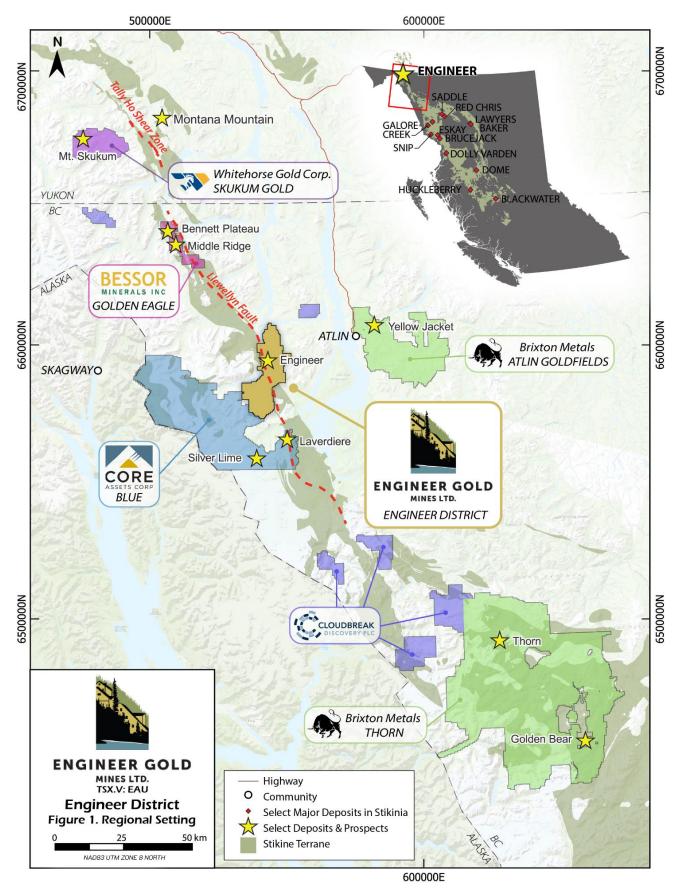
Stock Exchange Symbol	TSX.V: EAU
Share Price	\$0.03
Shares Issued	104,406,191
Warrants	48,418,434
Options	3,150,000
Fully Diluted	155,974,625

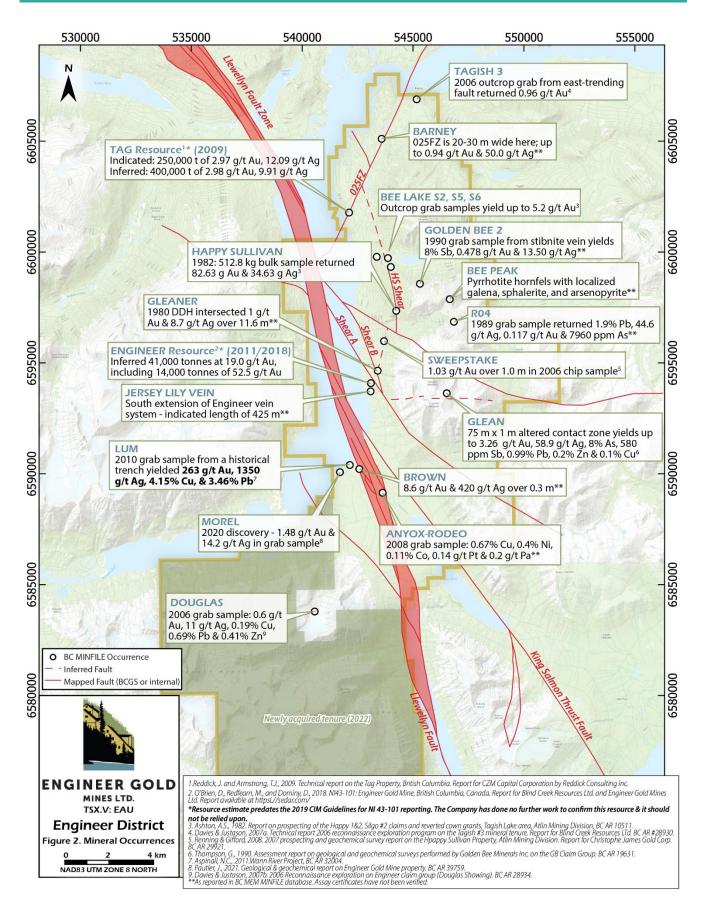
Key Highlights

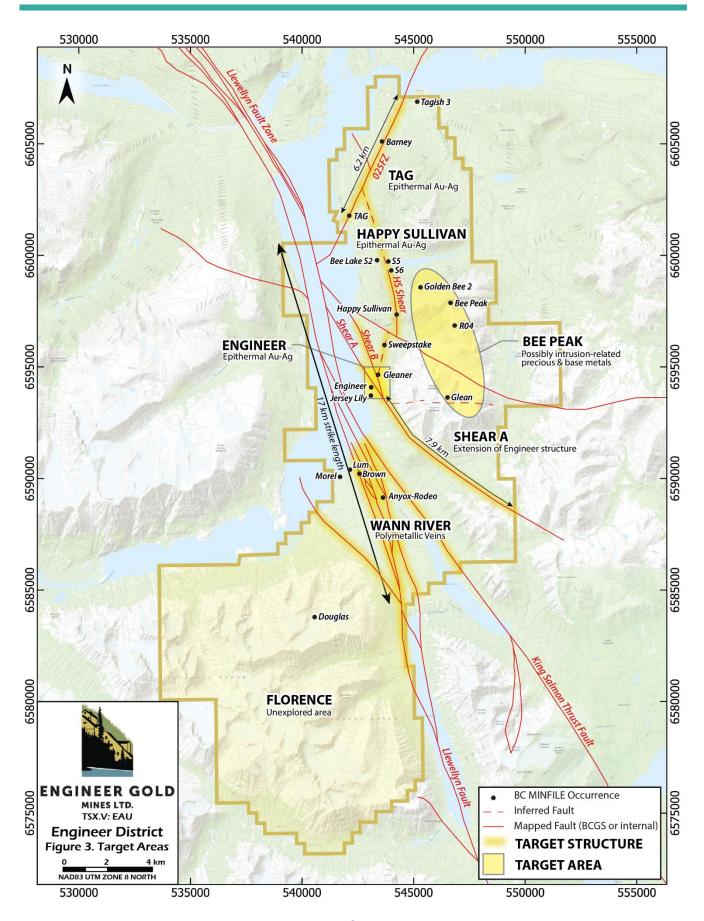
- The Engineer District is 35-km long contiguous claim block straddling the Llewellyn Fault near Atlin, BC. The Property hosts 19 known mineral occurrences, predominantly low-sulphidation epithermal Au-Ag mineralization such as the deposit at the historical Engineer Gold Mine.
 Other mineralization styles include high-grade polymetallic (Au-Ag-Cu-Pb-Zn) veins and auriferous veins that indicate potential for orogenic gold.
- In the past 35 years, only 42 holes totaling 7,104 m have been drilled at the historical Engineer Gold Mine. The lower limits of the bonanza zone have not been reached or tested underground, nor adequately along strike. Underground workings are accessible, facilitating exploration and expansion of the historical 2011 resource.
- Happy Sullivan and numerous other notable historic showings around the Engineer property have not seen significant modern exploration, and little to no drilling.
- Tag developed prospect has a near-surface historical 2009 Au-Ag resource open for further definition, exploration and development.
- Approximately 4 km south of the Engineer Gold Mine, the Wann River target areahosts several mineralized outrops and has produced bonanza grade polymetallic (Au-Ag-Cu-Pb-Zn) samples from float. Several veins warrant further exploration.
- Permitting is in progress for a 10,000 tonne bulk sample, which could allow the company to generate revenue and fund further exploration from ~1 oz/t Au ore. This could begin as early as 2024 if milling is done onsite.
- Newly staked ground from south of Wann River to the Core Assets (CSE:CC) property provides new ground for discovery along the Llewellyn Fault.

Moving Forward with EAU

- This land package has never before been managed by one company. Historical exploration work including geological mapping, drilling and geochemical sampling programs have been completed by several different companies over a century. A thorough compilation program is being completed this winter to serve as a base for further exploration.
- New CEO is bringing onboard an experienced geology team to complete compilation work, develop targets and execute field programs.
- Excellent brownfields exploration potential along strike and underground at the Engineer Gold Mine to add to the historical resource.
- Drill permits already in place around the Engineer Gold Mine south to Wann River (at lake level), and a year-round camp allow for drilling to start months earlier than higher elevation projects.
- Newly staked ground opens opportunities for new discovery potential like the contiguous Core Assets Corp (CSE:CC) CRD-porphyry.
- Ongoing compilation work will identify gaps in exploration and generate targets for new discovery.







The Engineer District includes a 17 km strike length along the long-lived, crustal-scale Llewellyn fault, which marks the western boundary to the Stikine Terrane in the area (Fig. 1). Regionally, mineralization along this corridor includes Late Cretaceous intrusion-related and mesothermal Au, such as at Bessor Minerals Inc.'s Golden Eagle property to the north, and Eocene epithermal Au-Ag deposits such as at Whitehorse Gold Corp.'s Mt. Skukum deposit and the *Engineer Gold Mine* (Castonguay et al., 2020). To the south of the Property approximately 12 km, Core Assets Corp's Laverdiere prospect represents Cu skarn and porphyry mineralization styles, while Brixton Metals' Thorn property, approx. 100 km to the southeast, hosts several styles of mineralization related to both porphyry and epithermal environments. The *Engineer District* hosts several occurrences of highgrade epithermal Au-Ag veins, polymetallic veins (Ag-Pb-Zn ± Au), and other instances of precious and base metals which are less well understood (Fig. 2).

Mineralization at the Engineer Gold Mine is hosted by secondary shears of the Llewellyn fault zone (*Shears A & B, Fig. 2*) and associated dilational quartz veins (the Engineer - Double Decker vein system). Shear A yields relatively low grade (< 0.5 g/t Au) over tens of metres, while dilational veins are narrow (0.3 – 3.0 m) but can yield very high grades with localized bonanza grade ore shoots (Smit, 1988; O'Brien, 2018; Pautler, 2021). The Company believes that exploration on several additional veins in the vicinity has excellent potential to expand a 2011 historical mineral resource estimate calculated on the remnants of the historically mined Engineer and Double Decker veins (Snowden, 2011). Additionally, the southward extension of *Shear A* is visible in LiDAR imagery for 6 km, and subsidiary lineaments on its east side may represent dilational structures (Pautler, 2021). The Shear A structure is mostly untested and unexplored along this 6 km strike length and represents a significant opportunity for discovery.

Across the northern area of the property at Tag, *025FZ*, a NNE-trending shear zone splaying from the Llewellyn fault, has been traced for 6.2 km (Fig. 3; Pautler, 2021). At its southwest end, the shear hosts the historical 2009 *TAG* mineral resource area along 900 m (Reddick & Armstrong, 2009). While the 025FZ bears many similarities to Shears A & B, oblique dilational veins such as those at Engineer have yet to be discovered. The Tagish 3 showing, an east-trending fault tens of metres wide at the north end of the 025FZ from which a 2006 grab sample yielded 0.96 g/t Au, demonstrates the potential for oblique mineralized structures (Davies & Justason, 2007a). NNW-trending lineaments identified in 2007 aeromagnetic imagery present worthy exploration targets.

Between Engineer and the 025FZ, the north-trending *HS Shear* hosts high-grade Au-Ag epithermal quartz veins at the *Happy Sullivan* showing. In 1982, a 512.8 kg bulk sample from the "upper vein" at Happy Sullivan contained 82.63 g Au and 34.63 g Ag (Ashton, 1982). Historic grab samples at the Bee Lake showings, 2.5 km along-strike to the north, imply continuation of gold mineralization and warrant modern exploration efforts of this historic trend, which is inferred over a strike length of 6.5 km (Ashton, 1982; Pautler, 2021).

Just 4 km south of the Engineer Mine, the *Wann River* target area has seen relatively little exploration. In 2010, grab samples from trenches at the *Lum* showing yielded up to 263 g/t Au, 1350 g/t Ag, 4.15% Cu, and 3.46% Pb (Aspinall, 2011). Continued prospecting in 2010 and 2011 identified seven mineralized outcrops; a follow-up diamond drill program intersected several mineralized veins between the Lum and Brown showings, including up to 11.3 g/t Au & 94.8 g/t Ag over 1.0 m (Aspinall, 2011). The Company believes there is significant potential for expansion of known mineralization in the vicinity of the occurrences at Wann, which holds a current drill permit. The along-strike extension of the Llewellyn fault to the southeast is overlain by a Au-Ag-Pb MMI soil geochemical anomaly, considered to be a high-priority exploration target (Pautler, 2021).

On the northeast side of the property, the *Bee Peak* target area hosts Au, Sb, and base metal occurrences that appear to be associated with felsic dykes and a narrow quartz-diorite body believed to belong to the Cretaceous Windy Table Complex (Mihalynuk et al., 1996). The area has never been drilled, though historic and prior geochemical and geophysical surveys provide several targets.

In October 2022, the Company staked an additional 11,234 hectares to the south in the *Florence* ranges. This newly acquired ground is underlain predominantly by intrusive rocks of the Early Jurassic Aishihik Plutonic Suite, which hosts polymetallic veins at the Douglas showing. The Florence target area is unexplored prospective ground ready for reconnaissance exploration.

**Resource estimates predate the 2019 CIM Guidelines for NI 43-101 reporting. The Company has done no further work to confirm these resources and they should not be relied upon.

References

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Qualified Person

The technical content of this news release has been reviewed and approved by Sue Bird, M.Sc., P.Eng., independent consultant, a qualified person, as defined by National Instrument 43-101.

About Engineer Gold Mines Ltd.

Engineer Gold Mine: The historic Engineer Gold Mine is a narrow vein past producing underground gold mine with an Inferred Mineral Resource of 41,000 t grading 19.0 g/t gold for 25,000 oz contained gold. The resource uses a cutoff grade of 5 g/t Au and assumes a 1m minimum mining width, which is similar to historical mining. It includes all material inside the mineralized shoots and is based on the payability (stope) limits. Within this resource is a higher-grade core of 14,000t grading 52.5 g/t gold (25 g/t gold Cut-Off) containing 23,600 oz contained gold. The resource grade was reconciled to a bulk tonnage sample which contained 175 tonnes at 23.9 g/t Au which is 16% higher than the resource grade of 20.6 g/t Au for the Engineer portion of the resource. This is considered acceptable for a nuggety gold deposit and exemplifies the potential conservatism of the 2018 resource. This resource estimate was initially calculated by Snowden Mining Industry Consultants Ltd. in 2011 and re-stated in the 2018 NI 43-101 Technical Report.

Note that this resource estimate predates the 2019 CIM Guidelines for NI 43-101 reporting. The company has done no further work to confirm this historical resource.

Tag Developed Prospect: The Tag mineralization is hosted within the northeast-trending 025FZ or Main zone, which contains an historical mineral resource estimate including 250,000 tonnes of Indicated material at average grades of 2.97 g/t Au and 12.09 g/t Ag, and an Inferred resource of 400,000 tonnes at average grades of 2.98 g/t Au and 9.91 g/t Ag. The resource estimate was calculated using the polygonal method with vertical section at 50m spacing, and grades composited over a minimum length of 2.0 meters. The Au was capped at a value of 4 g/t and Ag was capped at 25

g/t. Underground mining was assumed with all material having a minimum composited length of 2m, within the interpreted shapes and above the cutoff assumed to be amenable to underground mining. The cut-off grade used was 3.0 g/t gold equivalent, calculated with a silver to gold ratio of 59.927. This historical resource was published as an NI 43-101 report filed on SEDAR entitled "Technical Report on Resource Estimates for the Tag Property, Northern British Columbia", prepared for CZM Capital Corporation by Reddick Consulting Inc. and dated December 29, 2009.

Note that this estimate predates the 2019 CIM Guidelines for NI 43-101 reporting. The Company has done no further work to confirm this historical resource.

Wann River: The Wann River target area has seen grab samples from the Lum showing with up to 263 g/t Au and 1350 g/t Ag reported in 2010. Adjacent to the prolific Llewellyn fault, the Wann River project holds potential for significant further exploration and discovery.

Engineer Gold Mines Ltd.		

Cautionary Notes

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