

## Inferred Resource increases to 1 Moz at 11.3 g/t gold

Plus, additional high-grade results from up to 250m outside the Resource point to further grow the inventory

### KEY POINTS

- Independent JORC 2012 Inferred Resource for the Pickle Crow Gold Project increases by 170,000 oz to 1,000,000 oz @ 11.3 g/t gold
- The increased Resource takes into account both historical drilling and drilling undertaken by Auteco
- New drilling program which started after the cut-off for the Resource Estimate has intersected high-grade mineralisation in numerous areas up to 250m outside the Resource
- Multiple holes from targets outside of the Resource Estimate have already returned visible gold, with assays including:
  - 0.6m @ 99.4 g/t gold from 167.4m in AUDD0017 (inc. 0.3m @ 181.0 g/t gold fr 167.4m)
  - 1.6m @ 25.8 g/t gold from 95m in AUDD0013 (inc. 0.6m @ 65.2 g/t gold fr 95.7m)
  - 1.6m @ 19.6 g/t gold from 372m in AUDD0019
  - 3m @ 7.37 g/t gold from 261m in AUDD0010
- The newly expanded program comprises 45,000m of drilling, with 19 holes for 4,400m completed; A third diamond drill rig is expected to commence step out drill testing in September to expedite resource growth and test multiple walk-up targets
- Numerous high-grade targets identified since Project acquisition; These are expected to be drilled in 2020
- Auteco drill program confirms the updated geological model and the robustness of the high-grade nature of the mineralized gold system
- Auteco's aggressive drilling program is fully funded following the recent \$30.4m capital raising

Independent JORC 2012 Inferred Resource Estimate at selected lower cut-off grades at the Pickle Crow Gold Project

Lower Cut-Off	Tonnes (Mt)	Grade Gold g/t	Gold Million oz
2.0 g/t Au	3.2	10.1	1.1
<b>3.5 g/t Au</b>	<b>2.8</b>	<b>11.3</b>	<b>1.0</b>
5.0 g/t Au	2.1	13.7	0.9

**Auteco Minerals** (ASX: AUT) is pleased to announce that the JORC 2012 compliant Inferred Resource at its Pickle Crow Gold Project in Canada has increased 20 per cent to 1,000,000 ounces at 11.3 g/t gold.

The Company is also pleased to advise that the new drilling program at Pickle Crow has intersected high-grade extensions to mineralisation in several areas up to 250m away from the existing Resource.

The results of this latest drilling are not included in the new Resource Estimate and therefore highlight the strong potential for further increases in the Pickle Crow inventory.

Auteco Executive Chairman Ray Shorrocks said the Resource increase and the latest drilling results provided more evidence of the vast potential of Pickle Crow.

“Our drilling results are outstanding because they increase our geological confidence in the historically-identified areas of mineralisation and they are also extending the known mineralisation,” Mr Shorrocks said.

“To have established and grown a JORC Resource of this size in this short time speaks volumes about the quality of the mineralised system.

“And given the strength of the latest results, we have every reason to expect to achieve further growth in the inventory in time for our next planned Resource upgrade in the first half of 2021.

“Our confidence is increased by the reconnaissance drilling within the Core Mine Trend, which has resulted in what looks like multiple new, near-surface, high-grade early stage discoveries within a few hundred metres of current mine infrastructure. These exciting new discoveries have abundant visible gold and have returned assays up to 137.3 g/t gold.

“This early success supports Auteco’s investment assumption that historical exploration activity at the Pickle Crow Gold Mine had been constrained by prevailing geological assumptions that were open to challenge through an open-minded approach to old datasets and a return to first principals geological techniques.

“In light of these results, we have added a third drill rig and increased the program from 10,000m to at least 45,000m.”

#### **FURTHER HIGHLIGHTS:**

The Resource Estimate finalises additional review work of the existing data at Pickle Crow, including previous non-JORC compliant resources, with follow up drilling to confirm orientations and ongoing review of the lodes by Auteco geological staff. The estimation has been completed by Perth-based independent group Cube Consulting.

Auteco commenced its maiden drilling program at Pickle Crow in late May this year and now has a 45,000m diamond core drill programme underway. The Company anticipates updating the Resource in early 1H 2021.

- Mineralisation is open on all lodes along strike and at depth.
- Resources are from surface and are adjacent to existing underground mine development and infrastructure.

- Drill intercepts incorporated into the Updated Resource Estimate include (refer ASX release dated 29 June 2020):
  - 10.7m @ 50.9 g/t gold from 5.49m in 3-4-179
  - 1.1m @ 150.0 g/t gold from 156.5m in PC99-12
  - 1.7m @ 55.5 g/t gold from 91.29m in 744-14
  - 6.9m @ 17.7 g/t gold from 1.83m in 3-2-112
  - 1.2m @ 103.4 g/t gold from 20.24m in 744-24
  - 1.5 m @ 444.4 g/t gold from 22.65m (includes 0.5 m @ 1325.7 g/t gold from 23.65m) in PC-11-251
  - 2 m @ 69.1 g/t gold from 23.7m in PC-12-253
  - 0.9 m @ 878.7 g/t gold from 65.89m in PC-14-283
  - 9.9 m @ 12.9 g/t gold from 66.2m in PC-14-284
  - 2.6m @ 78.8 g/t gold from 37.08m in 2200-1-22-55
  - 1.2m @ 79.5 g/t gold from 104.8m in 4-38-41
  - 2.2m @ 37.6 g/t gold from 117.43m in 4-38-42

A third diamond drill rig has been scheduled for arrival in September 2020 to supplement Auteco's maiden diamond drilling campaign. Based on initial exploration results and observations, the drill program has been expanded to 45,000m with a 24-person, all-season camp to now established on site to support exploration activities.

There is significant scope for resource expansion through new discoveries 'in the shadow of the headframe' as well as along strike and at depth. Recent reconnaissance exploration drill results from targets outside of the Resource Estimate include the following high-grade drill results (refer to Appendix A for details):

**Vein 112 Target:**

- 3m @ 7.4 g/t gold from 261m in AUDD0010

**Vein 5 Extension:**

- 1.6m @ 25.8 g/t gold from 95m in AUDD0013 (including 0.6m @ 65.2 g/t gold from 96m and 0.3m @ 122.0 g/t gold from 95.7m)
- 0.6m @ 99.4 g/t gold from 167.4m in AUDD0017 (including 0.3m @ 181.0 g/t gold from 167.4m)

**Vein 11 Extension:**

- 4.85m @ 4.4 g/t gold from 350.15m in AUDD0019
- Vein 11 FW:
- 1.6m @ 19.6 g/t gold from 372m in AUDD0019 (including 0.5m @ 59.5 g/t gold from 372.35)

Additional potential for near term Resource expansion through incorporation of 'BIF style mineralisation' currently outside of the Resource Estimate, with historical drill results including:

- 8.54m @ 12.2 g/t gold from 4.27m in 1-29-45
- 23.03m @ 6.0 g/t gold from 42.54m in 2450-24
- 16.53m @ 5.5 g/t gold from 0m on 1-26-54
- 6.62m @ 8.9 g/t gold from 22.6m in 1-26-50

In addition, multiple underexplored, walk-up, near-mine targets outside of resources associated with regional scale major shear zones include (refer to ASX release 26 March 2020):

- Springer Shaft Target: 1.7m @ 36.6 g/t gold from 15.1 m in CPSH-88-01
- F Vein Target: 4.6m @ 9.3 g/t gold from 27.1m in CP-88-92
- SW Powder house Target: 6.1m @ 7.3 g/t gold from 86.6 m in PL04-26
- East Pat Shear: 6.0 m @ 7.7 g/t gold from 232 m in PC-10-145

**Figure 1: Vein 5 Extension: Close up of new interval outside of Resource Estimate. AUDD0017: Detail of interval grading 0.3m @ 181.0g/t gold from 167.4m (within 0.6m @ 99.4g/t gold from 167.4).**



### About the Mineral Resource Estimate (MRE) – Pickle Crow Gold Project

The Updated Mineral Resource Estimate is from within a 3.5km section of the core mineralised shear zone and incorporates multiple high-grade Lodes within a large mineralised corridor. This 3.5km section previously produced 1.5 Moz @ 16 g/t gold<sup>1</sup> until the mine closed in 1966. The current Resource includes 22 separate modelled lodes as shown in Figure 2. All resources are reported at a 3.5 g/t gold lower cut-off which is deemed acceptable based on industry costings associated with the likely mining method (narrow vein underground).

<sup>1</sup> Refer Sedar Technical report for historical production -

<https://www.sedar.com/GetFile.do?lang=EN&docClass=24&issuerNo=00022404&issuerType=03&projectNo=02810557&docId=4375165>

Global Inferred Resources have been grouped into table 1 below. All Resources are classified as inferred:

Independent JORC 2012 Inferred Resource Estimate at selected lower cut-off grades at the Pickle Crow Gold Project			
Lower Cut-Off	Tonnes (Mt)	Grade Gold g/t	Gold Million oz
2.0 g/t Au	3.2	10.1	1.1
<b>3.5 g/t Au</b>	<b>2.8</b>	<b>11.3</b>	<b>1.0</b>
5.0 g/t Au	2.1	13.7	0.9

- Figures may not add up due to rounding
- Mineral Resources that are not Ore Reserves have not demonstrated economic viability. The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues
- Mineral Resources are reported at a block cut-off grade of 3.5 g/t Au
- No minimum mining SMU parameters applied to the Inferred Mineral Resources.
- The average bulk density assigned to the quartz vein hosted mineralisation is 2.7 g/cm<sup>3</sup>.

The Pickle Crow Gold Deposit is a high grade, shear-hosted, mesothermal Archean lode gold deposit. The deposit occurs primarily within mafic volcanics and banded iron formation (BIF) units in the Pickle Crow assemblage of the Pickle Lake Greenstone belt; in the Uchi Lake Sub-province of the Superior Craton of the Canadian Shield.

Mineralisation is focused around steeply North-West dipping, regional scale shear zones with the mineralisation hosted near the Main Break structure, proximal to the highly strained, unconformable boundary between the Pickle Crow assemblage and the mafic-intermediate volcanics of the younger Confederation assemblage. A restricted, late-basin, Temiskaming-like sedimentary assemblage has also been identified in the hanging wall of this structure.

Multiple mineralisation styles have been identified on the property, but the Resource Estimation entirely comprises of **Quartz-Gold-Tungsten (+/-Tourmaline) Shear Veins**. These were the main focus of historical mining, frequently grading +15 g/t with metallurgical recoveries +98%. This vein mineralisation constitutes the current resource component

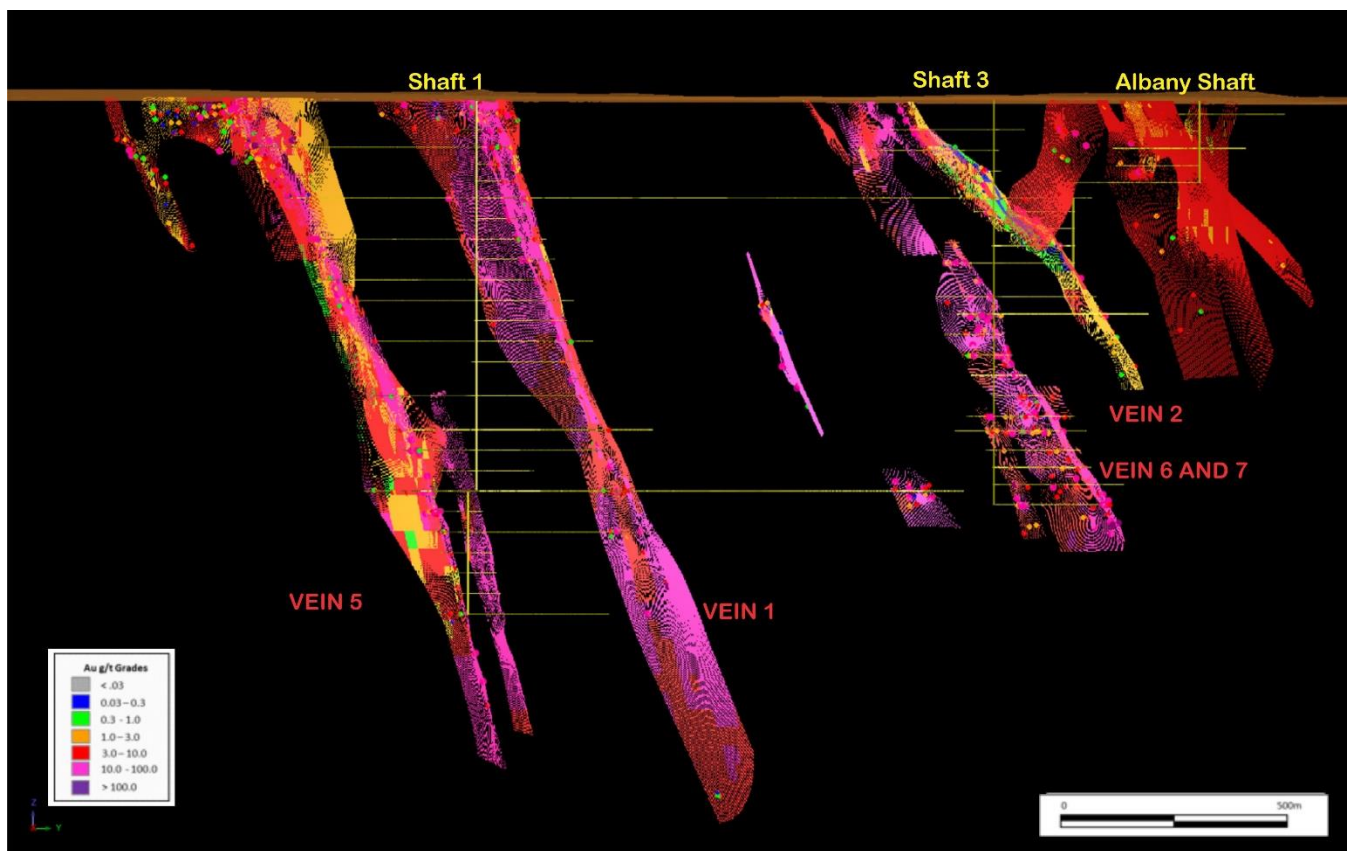
The Resource has been independently estimated by Cube Consulting Perth (see Competent Person statement). The estimate has been produced by 3D modelling of the lode systems and block model grade estimation using a combination of the 2D estimation modelling approach and 3D dynamic interpolation, both using Ordinary Kriging (OK). A full summary of the resource methodology and validation is included in the Appendix B JORC table. All project resources have been classified as Inferred based on current drill spacing and the historical drill results, which will require further supporting verification drilling and QAQC insertion. It is anticipated that Infill drilling and verification drilling will support an increase in resource classification.

Auteco commenced its maiden drilling program at Pickle Crow in May this year. Since then nineteen holes have been drilled with assays returned for nine holes and partial assays for further six holes. Auteco drilling has confirmed the current resource remains open with shallow high-grade results received from initial drilling. These results have not been included in the recent upgrade and will be followed up with an expanded 45,000m resource definition and discovery program now underway on site.

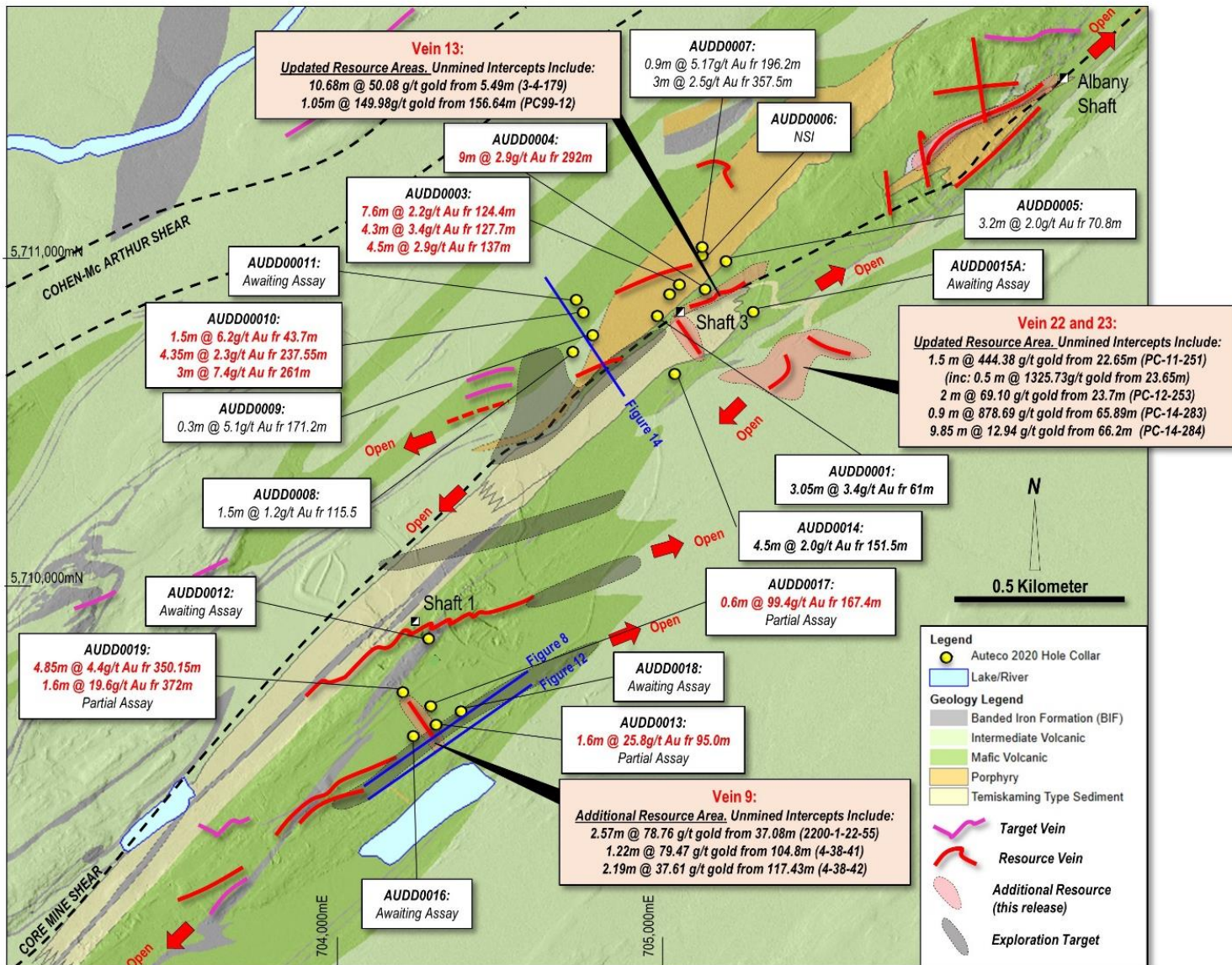
The updated resource differs from the previous 43-101 release for a combination of the following reasons:

- Removal of unconstrained and low-grade BIF hosted mineralisation from the estimate.
- Updated geological model and high-grade plunge interpretation for some domains based on a detailed structural review completed by AUT geologists.
- Better orebody modelling by using vein function modelling on 3D data vs the original sectional interpretation.
- Revised resource estimation methodology more suitable for narrow vein gold deposits.

*Figure 2: Long Section of the Pickle Crow Gold Project Resource Area showing block model and grouped by Shaft Number and underground development at the property.*



**Figure 3: Plan View of Pickle Crow mineralised trend highlighting additional resource areas and unmined intercepts incorporated into this updated Mineral Resource Estimate as well as the location of recent reconnaissance drilling (refer to ASX 29 June 2020 and Appendix A for details).**



This resource update differs from the Maiden Resource Estimate (refer to ASX release 29 June 2020) through its incorporation of 7 additional areas of mineralisation as shown in Figure 3. Sufficient geological confidence has been added through logging, mapping and additional drilling to be able to incorporate an additional 180,000oz @ into the Inferred Resource category.

Given the depth, width and grade of the deposit, Auteco considers that the mineralisation has a reasonable prospect of eventually being mined. Particularly when considering that the high-grade resources are close to existing underground infrastructure and in proximity to world class surface infrastructure, including highways and commercial hydro power lines.

## RECENT DRILLING HIGHLIGHTS NEW SHALLOW HIGH-GRADE GOLD DISCOVERIES

Auteco is actively exploring the Pickle Crow deposit with one diamond drill rig in operation since May 2020 (refer ASX announcement 27 May 2020) and a second drill rig mobilised to site in July (refer ASX announcement 29 June 2020).

To expedite resource growth and allow exploration step outs a third rig will be mobilised later this month as part of an expanded 45,000m diamond drilling program.

To date, nineteen drill holes for 4,464mm have been completed. Assay results have been received from ten drill holes with partial results received from a further six holes (refer to Appendix A for details).

Exploration efforts are currently focussed on the definition of additional resources within the top 500m from surface and within the Core Trend; host to the current Inferred Resource and historical mining and infrastructure. Numerous walk-up drill targets, 'in the shadow of the headframe', have been identified from historical drilling datasets and the drill rig is adding geological confidence to the significant intercepts for conversion to JORC 2012 compliant resources.

Reconnaissance exploration drilling has resulted in three new high-grade gold discoveries/extensions already with significant step out mineralisation returned from Vein 5 extensions, Vein 11 extensions including a new footwall discovery, and a new Vein 112.

### Vein 5 Extension Discovery

A 210m step out to the ENE from the current Vein 5 resource wireframe resulted in the shallow intersection of 1.7m @ 24.5 g/t gold in AUDD0013(see Figures 4, 5 and 8 and refer to Appendix A). Multiple occurrences of visible gold from within the interval provided encouragement for follow up drilling. A further four holes have now been drilled with assays pending.

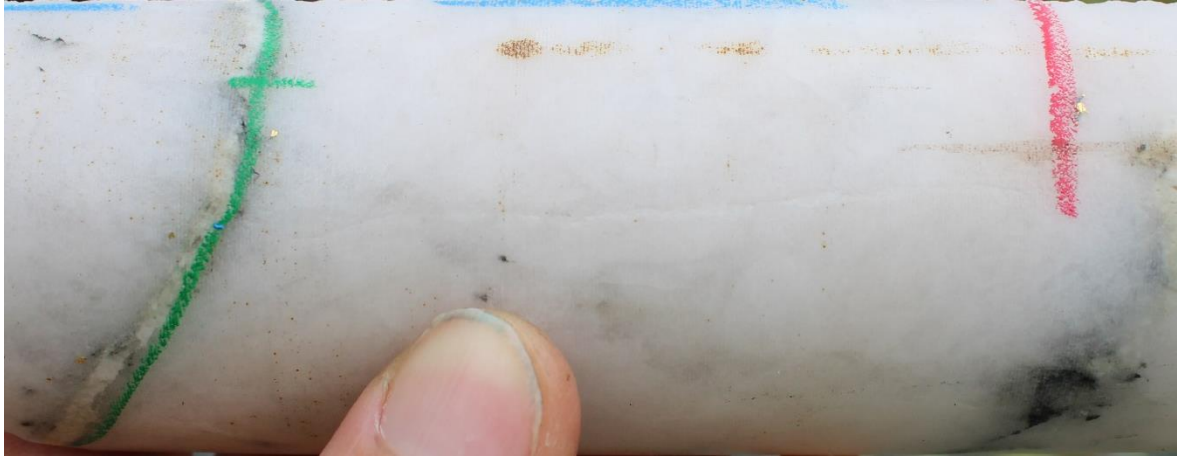
Initial assays have also been returned from AUDD0017, 80m down dip from AUDD0013, which intersected grades of up to 137.3 g/t gold within an interval of 0.6m @ 72 g/t gold (see Figures 6, 7 and 8 and refer to Appendix A).

**Figure 4:** Vein 5 Extension discovery: AUDD0013: 1.6m @ 25.8 g/t gold from 95.0m in AUDD0013 (including 0.6m @ 65.2 g/t gold from 96m and 0.3m @ 122.0 g/t gold from 95.7m). 60cm quartz-tourmaline-gold shear vein in high-strain, sericite-ankerite altered basalts with multiple 0.5-1cm shear veins within fabric.





**Figure 5:** Vein 5 Extension discovery: AUDD0013: 1.6m @ 25.8 g/t gold from 95.0m in AUDD0013 (including 0.6m @ 65.2 g/t gold from 96m and 0.3m @ 122.0 g/t gold from 95.7m). Detail showing multiple 1-3mm flecks of visible gold within quartz-tourmaline-gold shear vein. NQ core, diameter 47.6mm.



**Figure 6:** Vein 5 Extension discovery: AUDD0017: 0.6m @ 99.4 g/t gold from 167.4m in AUDD0017 (including 0.3m @ 181.0 g/t gold from 167.4m). 30cm quartz-tourmaline-gold shear vein in high-strain, sericite-ankerite altered basalts with multiple 0.5-1cm shear veins within fabric.

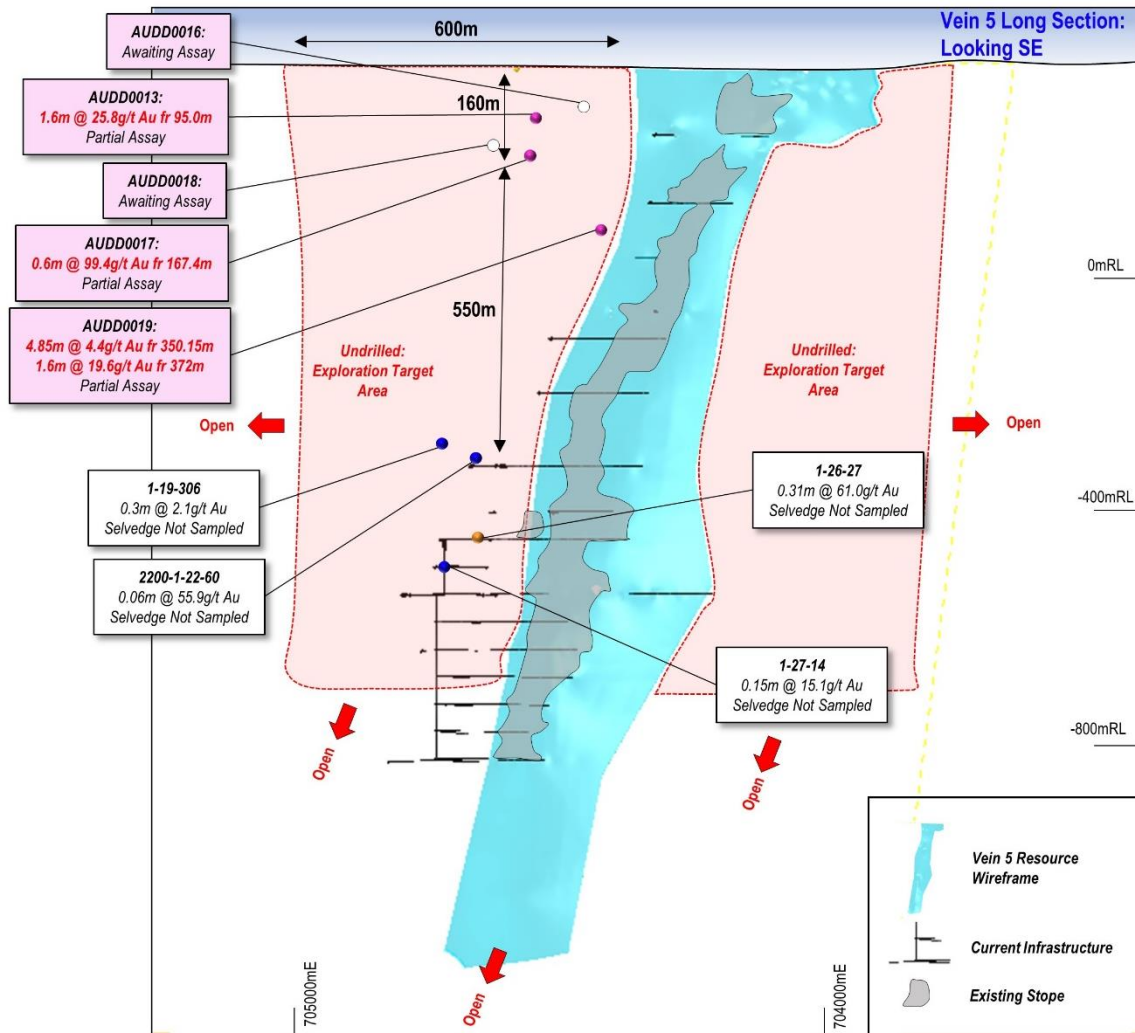


**Figure 7:** Vein 5 Extension discovery: AUDD0017: 0.6m @ 99.4 g/t gold from 167.4m in AUDD0017 (including 0.3m @ 181.0 g/t gold from 167.4m). 30cm quartz-tourmaline-gold shear vein in high-strain, sericite-ankerite altered basalts with multiple 0.5-1cm shear veins within fabric. NQ core, diameter 47.6mm.



Initial results are highly encouraging with AUDD0013 and AUDD0017, indicating vertical continuity in the high-grade vein component of mineralisation. Drilling is still wide-spaced (80m x 80m) and shallow. Narrow high-grade intercepts of up to 0.31m @ 61 g/t gold in hole 1-26-27 have been intersected on Vein 5 in historical drilling a further 550m below the intercept in AUDD0017 (710m below surface – see Figure 8 below and refer to Appendix A). Although these intercepts appear narrow the historical drilling only sampled the vein itself with altered and mineralised wall rock discarded.

**Figure 8: Vein 5 Extension discovery.** Long section view of current resource outline, historical stopes and recent drillhole intercepts. Viewing 155°.



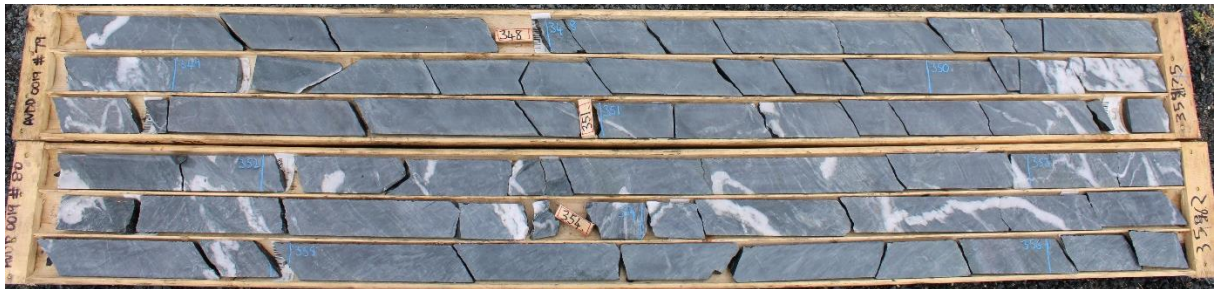
Coupled with historical indications of high-grade gold on the no 5 vein at depth, Auteco’s drilling provides encouragement for further step outs in the drilling both to the ENE and WSW and points to the further resource potential from the Vein 5 extension target. Vein 5 remains open in all directions.

### Vein 11 Extension and 11 Footwall Discovery

Hole AUDD0019 was drilled to a depth of 423m through the Vein 5 extension target. The hole intersected multiple zones of sub-parallel, high grade mineralisation in the footwall of Vein 5.

Vein 11 was intersected with multiple occurrences of visible gold within an interval of 4.85m @ 4.4 g/t gold from 350.15m (see Figure 9 and 12 as well as Appendix A). This represents a 120m step out from the current Vein 11 resource wireframe with no historical or recent drilling into the extension target in any direction.

**Figure 9:** Vein 11 Extension discovery: AUDD0019: 4.85m @ 4.4 g/t gold from 350.15m in AUDD0019. Multiple 1- 15cm quartz-tourmaline-gold shear veins and quartz-ankerite pyrite extension veins in moderate-strain, sericite-ankerite altered basalts with multiple 0.5-1cm shear veins within fabric.



Hole AUDD0019 also intersected multiple 20-30cm quartz-tourmaline-gold veins at 372m with initial assays returning up to 59.5 g/t gold within an interval of 1.6m @ 19.6 g/t gold (see Figure 10, 11 and 12 and Appendix A). This represents a previously unrecognised mineralised zone sub-parallel to the trend of Vein 11 outside of current resources. Mineralisation remains open in all directions.

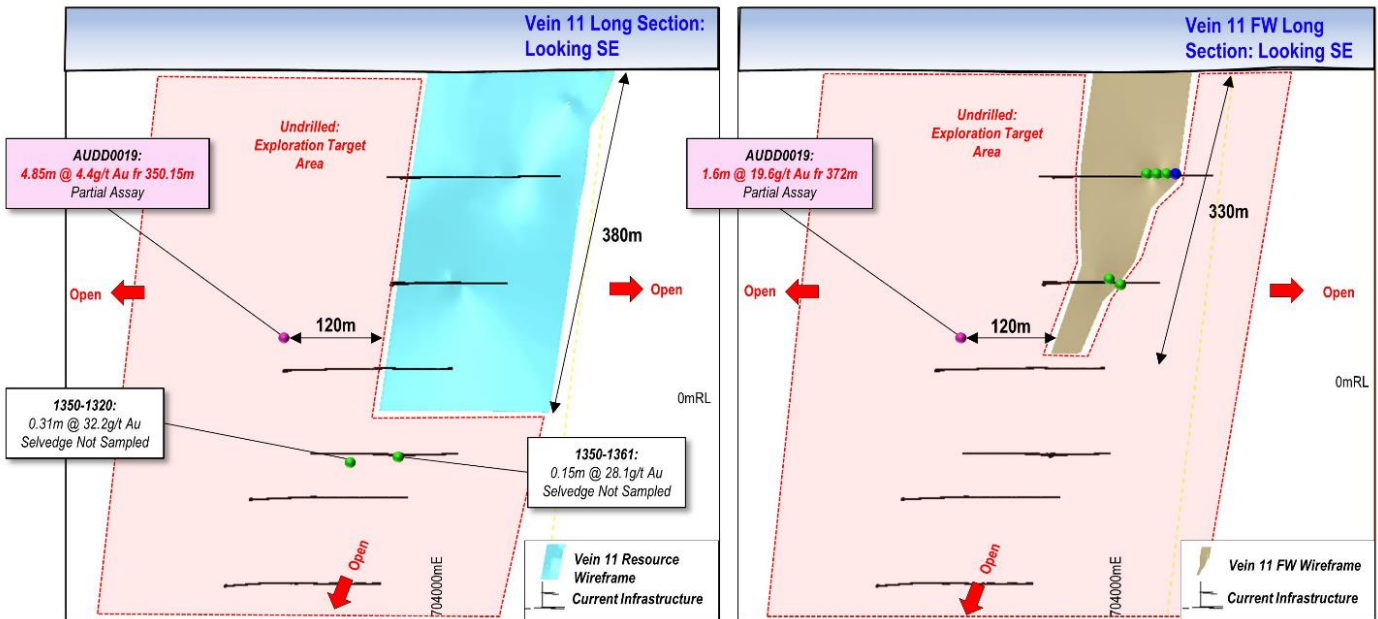
**Figure 10:** Vein 11 Footwall discovery: AUDD0019: 1.6m @ 19.6 g/t gold from 372m (including 0.5m @ 59.5 g/t gold from 372.35) in AUDD0019. Multiple 20 to 30cm quartz-tourmaline-gold shear veins and quartz-ankerite pyrite extension veins in moderate-strain, sericite-ankerite altered basalts with multiple 0.5-1cm shear veins within fabric.



**Figure 11:** Vein 11 Footwall discovery: AUDD0019: 1.6m @ 19.6 g/t gold from 372m (including 0.5m @ 59.5 g/t gold from 372.35) in AUDD0019. Detail of quartz-tourmaline-gold vein. View of approximately 5cm length of halved NQ core.



**Figure 12: Vein 11 and 11 FW Extension discoveries. Long section view of current resource outline, historical stopes and recent drillhole intercepts as well as scale of search area. Viewing 155°.**



Given the reconnaissance nature of the drilling on the no 11 Vein extensions and footwall mineralisation to date this represents an exciting opportunity for the company to delineate additional resources proximal to existing mine infrastructure.

### Vein 112 Discovery

The Vein 112 discovery was intersected in hole AUDD0010 with 3m @ 7.4 g/t gold intersected at 261m down hole at the high strain contact between the mafic volcanics of the Pickle Crow assemblage and the late basin, Temiskaming type conglomerates (refer to figures 13, 14 and Appendix A for details). The mineralisation is marked by multiple 1-30cm Quartz-ankerite-pyrrhotite-pyrite-gold veins with widespread fuchsite-sericite-ankerite alteration to the selvedge. Mineralisation is open along strike and at depth.

**Figure 13: Vein 112 discoveries. 3m @ 7.4 g/t gold from 261m in AUDD0010. Multiple quartz-ankerite-pyrrhotite-pyrite-gold veins within high strain fuchsite, sericite and ankerite altered basalts at the contact between basalts and Temiskaming like conglomerates.**



### **Pickle Crow Gold Project – Further Resource Opportunities Within the Core Mine Trend**

Multiple mineralisation styles besides the Quartz-tungsten-tourmaline-gold shear veins that currently comprise the JORC 2012 vein have been recognised from within the core mine trend.

Banded Iron Formation Mineralisation (BIF style) comprises structurally controlled sheeted vein arrays hosted within the BIF. Partial replacement of iron oxide minerals by sulphides (predominantly pyrrhotite, less often pyrite and arsenopyrite) is frequently observed to the selvedge of these veins. Initial evaluation of this style of mineralisation and its structural setting has highlighted its potential to contribute further resources to the global Resource Estimate. Significant results from this style of mineralisation from outside of the Resource Estimate include (refer to Appendix A for further details):

- 8.54m @ 12.2 g/t gold from 4.27m in 1-29-45
- 23.03m @ 6.0 g/t gold from 42.54m in 2450-24
- 16.53m @ 5.5 g/t gold from 0m on 1-26-54
- 6.62m @ 8.9 g/t gold from 22.6m in 1-26-50

### **Pickle Crow Gold Project – Regional Potential Beyond the Core Mine Trend**

Additional underexplored, mineralised trends within the property and outside of the maiden resource area have been identified. Walk-up drill targets within the near mine area are shown in Figure 9 below and include (refer ASX announcement 26 March 2020):

#### **Core Mine Shear**

Shallow drill intersections include:

- Springer Shaft Target: 1.7m @ 36.6 g/t gold from 15.1 m in CPSH-88-01
- F Vein Target: 4.6m @ 9.3 g/t gold from 27.1m in CP-88-92
- SW Powder house Target: 6.1m @ 7.3 g/t gold from 86.6 m in PL04-26

#### **East Pat Shear**

Drill intersections from the East Pat Target include:

- 35.7 m @ 2.2 g/t gold from 21.5 m in PC-10-108
- 6.0 m @ 7.7 g/t gold from 232 m in PC-10-145

#### **Cohen -Mac Arthur Shear**

Drill intersections include:

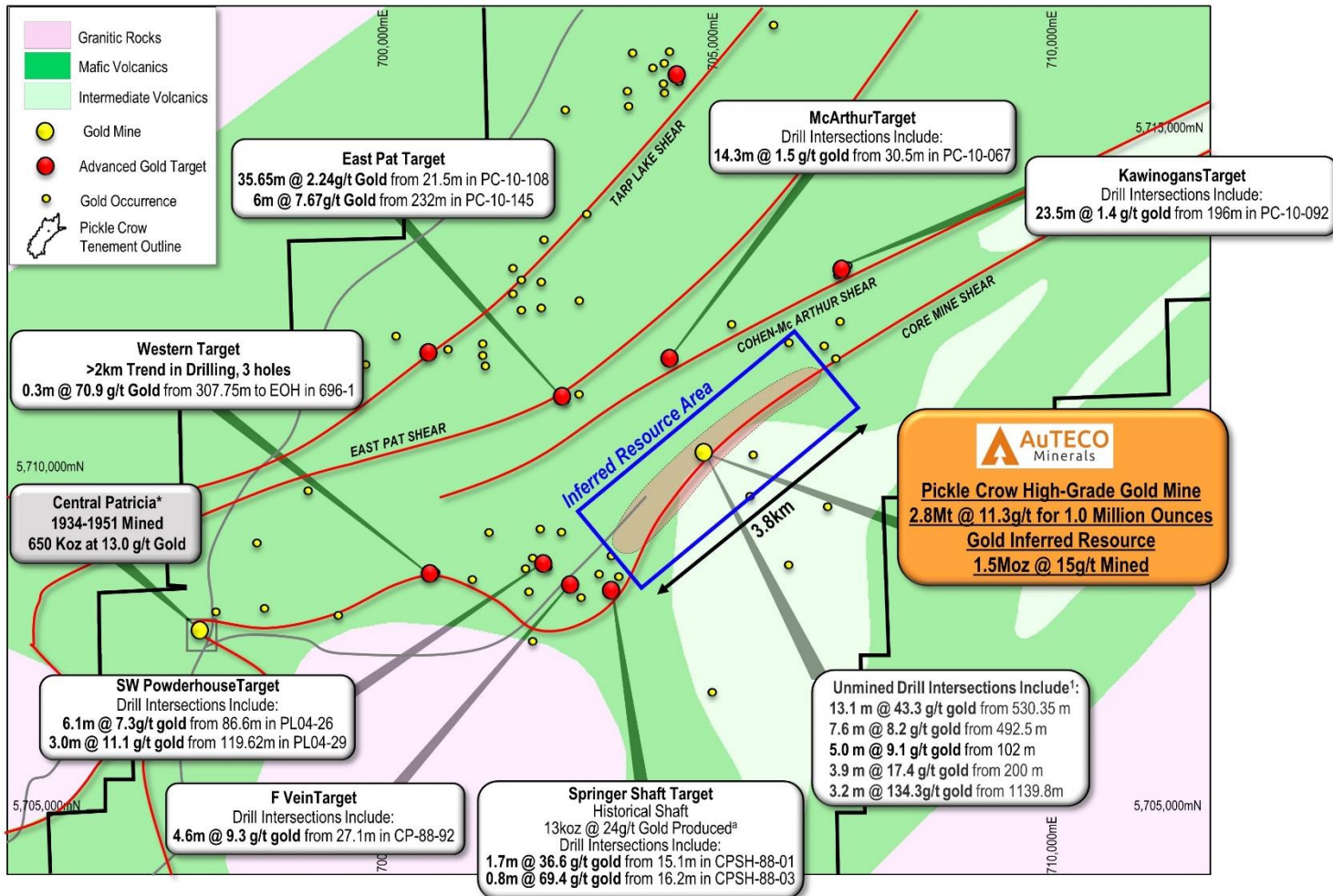
- MacArthur Target: 14.3 m @ 1.5 g/t gold from 30.5 m in PC-10-067

#### **Kawinogans Target**

Drill intersections include:

- 23.5 m @ 1.4 g/t gold from 196 m in PC-10-092

**Figure 14 3-** Location of the high-grade, Pickle Crow and Central Patricia Gold mines and targets related to the Core Mine, Cohen-MacArthur and East Pat shear zones. (° Sourced from Northern Miner, May 1984 and first reported by Auteco on 28 March 2020. The Company confirms that it is not aware of any new information or data that materially affects the announcement).



These areas are currently being subjected to initial geological field assessment by Auteco field geologists ahead of proposed regional exploration drilling in the winter (when the regional ground is more accessible).

### SUMMARY OF JORC TABLE 1

A summary of JORC Table 1 is provided below for compliance with the Mineral Resource and in-line with the requirements of ASX listing rule 5.8.1

### Geology and Geological Interpretation

The Archean Pickle Crow Orebody consists of 22 separate high-grade, lode gold domains hosted across a variety of different lithologies ranging from Pickle Crow Basalts, through Banded Iron Formation and Porphyry units. There is sufficient confidence in the geological modelling of the orebody geometries for Inferred Resource Estimation, with variable confidence dependent on drilling density, geological confidence and historical QAQC.

The Mineral Resource sits within an area of 3,800m strike (in a NE direction) of the core mine trend and within an 800m section of stratigraphy and has been interpreted to extend at its maximum 1,500m below surface in close proximity to where the underground development stops.

### **Drilling Techniques, Sampling and assaying**

Drilling included in the Resource Estimation at Pickle Crow consists of historical surface and underground drilling. Overall, 3,866 holes for 322,712m of dominantly NQ diamond drilling are incorporated into the database with 3,080 holes for 129,000m drilled from underground prior to 1988 and the remainder from surface. 370 NQ diamond drill holes for 130,362m have been completed since 2008. 10 NQ Diamond drill holes for 2389m recently completed by Auteco (2020) have been incorporated into the resource estimation.

Core was cut in half with one half retained as a reference, and the other sent for assay. Assays from diamond drilling post 1981 are Fire Assay results from various accredited Canadian laboratories. Historical assay methods prior to this are unknown but have been verified by duplicate sampling by historical operators at the project.

Post 2008 samples were dispatched to ALS Chemex for gold by 50g Fire Assay with atomic absorption finish. Samples greater than 5 g/t gold were reassayed by 50g Fire Assay with gravimetric finish. All samples greater than 10 g/t gold were additionally sent for pulp metallics (950g).

Auteco drilling samples were dispatched to AGAT laboratories for assay by 30g Fire Assay with atomic absorption finish. Samples greater than 5 g/t gold were reassayed by 50g Fire Assay with gravimetric finish. All samples greater than 0.2 g/t gold have additionally been sent for pulp metallics (1000g) but results have not yet been received.

### **Estimation Methodology**

The MRE has been produced by 3D modelling of the lode systems and block model grade estimation using a combination of 2D estimation modelling approach and 3D dynamic interpolation (DK), both using Ordinary Kriging (OK). The estimation methodology is briefly summarised as follows:

- The primary estimation domains are based on the 3D geological wireframing of quartz veins and BIF hosted mineralisation provided by Auteco. The domain interpretations were based on historical UG mining knowledge of the steeply dipping quartz veining known to host gold mineralisation from drill logging and descriptions of mapping and sampling.
- The mineralised domains acted as a hard boundary to control the June 2020 MRE.
- Drill hole sample data was flagged using domain codes generated from 3D mineralisation domains. Sample data was composited over the full downhole interval. There were consequently no residuals. Intervals with no assays were assigned background grades for the compositing routine as these un-assayed intervals in the drill holes were assumed to be waste.
- Gold grade distributions within the estimation domains were assessed to determine if high grade cuts or distance limiting should be applied on a domain by domain basis. The influence of extreme grade values was reduced by top-cutting where required. The top cut levels were determined using a combination of top-cut analysis tools (grade histograms, log probability plots and CVs). Top cuts were reviewed and applied on a domain basis.
- The 2D estimation approach using OK was deemed appropriate for the very narrow, linear and continuous zones hosted by quartz veins. Interval composites were generated for the mineralised lode, which were then weighted by their respective widths to calculate an accumulation variable. The accumulation variable for gold was then used for variogram analysis and 2D interpolation of gold grades. The estimated 2D block values were then



exported back into 3D space.

- Several quartz vein hosted domains show ribbon-like structures and although the overall dip and dip direction of most of the lodes are consistent, there are enough changes in geometry to require locally varying search ellipse and variogram directions. The dynamic anisotropy search feature in Surpac was used in which the search neighbourhood ellipse dip and dip direction are defined separately for each block approximating the orientation of each of the mineralised zones.
- For mineralised domains estimated using 2D OK method, variogram ranges and search distances were defined in a rotated horizontal plane. For the 3D DK method, variogram modelling was conducted to provide nugget, sill and range for 3 directions. Variogram maps were initially analysed in plan, east-west and north-south section to confirm continuity trends and to refine parameters for experimental variogram calculation.

Block model validation was conducted by the following means:

- Visual inspection of block model estimation in relation to raw drill data on a section by section basis.
- Volumetric comparison of the wireframe/solid volume to that of the block model volume for each domain.
- A global statistical comparison of input and block grades, and local composite grade (by northing and RL) relationship plots (swath plots), to the block model estimated grade for each domain.

### **Bulk Density**

A bulk density of 2.7g/cm<sup>3</sup> was assigned to mineralised quartz veins based on test work completed by previous operator's PC Gold Inc.

### **Classification**

The Mineral Resource has been entirely classified as Inferred. The classification is based on the relative confidence in the mineralised domain countered by high nugget values, variable drill spacing, un-verifiable historical database and partial lack of historical QAQC.

### **Mining factors or Assumptions**

Underground mining is assumed; however no rigorous application has been made of minimum mining width, internal or external dilution.

### **Metallurgical Factors or Assumptions**

Initial metallurgical test work was completed by previous operators on the high-grade vein mineralisation at Pickle Crow and can be summarised as:

- Excellent total gold extractions to a maximum exceeding 99% through a combination of gravity and 48-hour cyanide leach bottle rolls
- Excellent gravity recoveries of up to 92.4% of total gold recovered by the Knelson Concentrator prior to cyanide leaching.

These results are in line with the historical performance of the Pickle Crow Gold mine which operated between 1935 and 1966 with recoveries averaging slightly over 98% recovered through a combination of gravity and cyanidation.

### Reporting Cut-Off grade

A 3.5 g/t cut-off grade was used to report the Mineral Resources. This cut-off grade is estimated to be the minimum grade required for economic extraction at current prices.

**Given the depth, width and grade of the deposit Auteco Minerals Ltd. considers that the mineralisation incorporated into the resource estimation has a reasonable prospect of eventually being mined. Particularly when considering the high-grade resources are close to existing underground infrastructure and in proximity to existing highways and commercial power lines. In addition, there is already a successful history of commercial production at the Pickle Crow Gold Mine which produced 1.5 Million oz @ 16 g/t Gold<sup>1</sup> between 1935 and 1966 before eventual closure.**

For further information regarding Auteco Minerals Ltd please visit the ASX platform (ASX:AUT) or the Company's website <https://www.autecominerals.com.au/>

For and on behalf of the Board

A handwritten signature in black ink, appearing to read 'RS', with a long horizontal stroke extending to the right.

**Mr Ray Shorrocks**

Executive Chairman

Auteco Minerals Ltd

Phone: +61 8 9220 9030

### About Auteco Minerals

Auteco Minerals Ltd (ASX: AUT) is an emerging mineral exploration company focused on advancing high-grade gold resources at the Pickle Crow Gold Project in the world-class Uchi sub-province of Ontario, Canada. Pickle Crow is one of Canada's highest-grade gold mines.

Auteco's Directors and exploration team have a proven track record of gold discoveries and creating wealth for shareholders and stakeholders. The Company also has a joint venture on the Limestone Well Vanadium-Titanium Project in Western Australia.

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<sup>1</sup> Refer Sedar Technical report for historical production -

<https://www.sedar.com/GetFile.do?lang=EN&docClass=24&issuerNo=00022404&issuerType=03&projectNo=02810557&docId=4375165>

## Competent Person Statement

Certain Exploration Results referred to in this announcement were first reported in accordance with ASX Listing Rule 5.7 in the Company's announcements of 28 January 2020 and 26 March 2020. The Company confirms that it is not aware of any new information or data that materially affects the information included in the previous announcements.

The information in this announcement that relates to new Exploration Results and the Mineral Resource Estimate is based on and fairly represents information and supporting information compiled by Mr Marcus Harden, who is a Member of the Australasian Institute of Geoscientists. Mr Harden is an employee of the Company and has sufficient experience in the style of mineralisation and type of deposit under consideration and qualifies as a Competent Person as defined in the 2012 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Harden holds securities in Auteco Minerals Limited and consents to the inclusion of all technical statements based on his information in the form and context in which it appears.

The information in this announcement that relates to the Mineral Resource Estimate is based on and fairly represents information and supporting information compiled by Mr Brian Fitzpatrick. Mr Fitzpatrick is a full time employee of Cube Consulting Pty Ltd, who specialises in mineral resource estimation, evaluation and exploration. Neither Mr Fitzpatrick nor Cube Consulting Pty Ltd holds any interest in Auteco Minerals Ltd, its related parties, or in any of the mineral properties that are the subject of this announcement. Mr Fitzpatrick is a member of the Australian Institute of Geoscientists and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person (or "CP") as defined in the 2012 Edition of the Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code). Mr Fitzpatrick has reviewed the contents of this ASX announcement and consents to the inclusion in this announcement of all technical statements based on his information in the form and context in which they appear.

## Disclaimers

References to previous ASX announcements should be read in conjunction with this release.

### **Not for release or distribution in the United States**

This announcement has been prepared for publication in Australia and may not be released to US wire services or distributed in the United States. This announcement does not constitute an offer to sell, or a solicitation of an offer to buy, securities in the United States or any other jurisdiction. Any securities described in this announcement have not been, and will not be, registered under the US Securities Act of 1933, as amended (the "US Securities Act") and may not be offered or sold in the United States except in transactions exempt from, or not subject to, the registration requirements of the US Securities Act and applicable US state securities laws.

### **Forward Looking Information**

This announcement contains forward looking statements concerning the Company. Forward-looking statements are not statements of historical fact and actual events and results may differ materially from those described in the forward-looking statements as a result of a variety of risks, uncertainties and other factors. Forward-looking statements are inherently subject to business, economic, competitive, political and social uncertainties and contingencies. Many factors could cause the Company's actual results to differ materially from those expressed or implied in any forward-looking information provided by the Company, or on behalf of the Company. Such factors include, among other things, risks relating to additional funding requirements, metal prices, exploration, development and operating risks, competition, production risks, regulatory restrictions, including environmental regulation and liability and potential title disputes. Forward looking statements in this announcement are based on the Company's beliefs, opinions and estimates of the Company as of the dates the forward-looking statements are made, and no obligation is assumed to update forward looking statements if these beliefs, opinions and estimates should change or to reflect other future developments. Although management believes that the assumptions made by the Company and the

expectations represented by such information are reasonable, there can be no assurance that the forward-looking information will prove to be accurate. Forward-looking information involves known and unknown risks, uncertainties, and other factors which may cause the actual results, performance or achievements of the Company to be materially different from any anticipated future results, performance or achievements expressed or implied by such forward-looking information. Such factors include, among others, the actual market price of commodities, the actual results of future exploration, changes in project parameters as plans continue to be evaluated, as well as those factors disclosed in the Company's publicly filed announcements. Readers should not place undue reliance on forward-looking information.

The Company does not undertake to update any forward-looking information, except in accordance with applicable securities laws. No representation, warranty or undertaking, express or implied, is given or made by the Company that the occurrence of the events expressed or implied in any forward-looking statements in this announcement will actually occur.

## APPENDIX A:

**Table 1: Significant Intercept Table.** Cut-off grade of 1 g/t Gold allowing for 1m internal dilution (NSI – No significant Intercept). All cords in UTM NAD 83 z15.

Hole No.	Easting	Northing	Elevation	Azimuth	Dip	Drilled Length	From	To	Width	Assay
						(m)	(m)	(m)	(m)	g/t Au
AUDD0001	704983	5710808	341	223	-60	114.3	61	64.05	3.05	3.35
AUDD0002	705018	5710874	341	200	-60	192				NSI
AUDD0003	705050	5710908	341	199	-58	261	112	112.6	0.6	1
							124.4	132	7.6	2.24
							127.7	132	4.3	3.36
							137	141.5	4.5	2.87
							155.2	156	0.8	1.35
AUDD0004	705127	5710888	341	200	-60	378	48	48.6	0.6	2.01
							176.75	178	1.25	0.38
							284	285	1.0	1.71
							292	301	9.0	2.91
AUDD0005	705186	5710974	341	205	-59	222	54.25	55	0.75	1.08
							68	69.2	1.2	1.19
							70.8	74	3.2	2.02
AUDD0006	705119	5710996	341	200	-60	96.7	91.28	95.32	4.04	NSI
AUDD0007	705102	5710999	341	205	-61	387	196.2	197.1	0.9	5.17
							200.5	206.5	6.0	1.15
							355.5	356	0.5	1.15
							357.5	360.5	3.0	2.47
AUDD0008	704735	5710698	341	148	-57	204	115.5	117	1.5	1.23
AUDD0009	704783	5710757	340	161	-60	225	171.2	171.5	0.3	5.14
							196.4	198	1.6	2.09
AUDD0010	704755	5710818	340	160	-60	309	43.7	45.2	1.5	6.2
							237.55	241.9	4.35	2.31
							246.8	247.3	0.5	3.26
							261	264	3.0	7.37
AUDD0011	704743	5710857	340	158.31	64	107.97				
AUDD0012	704294	5709842	343	161.17	58.43	71.6				
AUDD0013	704315	5709573	340	175.11	60.97	108	95.0	96.6	1.6	25.8
						inc	95.7	96.3	0.6	65.2
AUDD0014	705038	5710633	342	304.89	56.15	321.2	88	89	10	1.52
							115.1	115.6	0.5	1.98
							117.4	118.1	0.7	1.19
							121.9	122.6	0.7	1.78
							147	151.5	4.5	1.99
AUDD0015A	705276	5710822	344	282.263	59.633	438	377.5	380.7	3.2	1.77
AUDD0016	704244	5709543	357	179.94	60.62	186				
AUDD0017	704301	5709629	350	174.23	60.75	258	167.4	168	0.6	99.4
						inc	167.4	167.7	0.3	181.0
AUDD0018	704390	5709613	350	173.753	57.767	161.5			0	

<b>AUDD0019</b>	704212	5709677	353	181.79	57.79	423	350.15	355	4.85	4.4
							372	373.6	1.6	19.64
						inv	372.35	372.85	0.5	59.5
							340.6	340.9	0.3	3.27

**Table 2: Historical Significant Intercept Table.** Cut-off grade of 1 g/t Gold allowing for 1m internal dilution (NSI – No significant Intercept). All cords in UTM NAD 83 z15.

Hole No.	Easting	Northing	Elevation	Azimuth	Dip	Drilled Length	From	To	Width	Au
						(m)	(m)	(m)	(m)	(ppm)
<b>PC-11-251</b>	705491.75	5710739.23	343.52	140	-80	50.67	22.65	24.15	1.5	444.38
						incl:	23.65	24.15	0.5	1325.73
<b>PC-12-253</b>	705491	5710738.6	343.6	140	-90	51	15.3	15.8	0.5	1.15
						and	23.7	25.7	2	69.1
<b>PC-14-283</b>	705336.46	5710679.19	344	160	-70	230	65.89	66.79	0.9	878.69
						and	71.45	77	5.55	10.6
						and	80.2	81.7	1.5	1.92
						and	89.85	91.06	1.21	5.03
<b>PC-14-284</b>	705336.34	5710679.32	344	160	-60	155	66.2	76.05	9.85	12.94
<b>3-4-179</b>	705000.876	5710762.605	232.7	297.13	67	25.01	5.49	16.17	10.68	50.08
<b>PC99-12</b>	705003.29	5710860.22	340.57	190	-58	183	151.85	152.6	0.75	202.99
							156.5	157.55	1.05	149.98
<b>744-14</b>	704909.03	5710859.97	340.22	157	-60	244.92	62.1	69.65	7.55	1.16
							72.24	81.76	9.52	2.49
							91.29	92.96	1.67	55.53
							183.64	184.4	0.76	1.71
							202.69	204.9	2.21	1.54
							219.46	222.81	3.35	6.83
<b>3-2-112</b>	704907.018	5710796.418	309.72	161	-11	96.08	1.83	8.69	6.86	17.73
<b>744-24</b>	704876.66	5710778.74	340.39	338	-60	45.75	20.24	21.46	1.22	103.37
<b>4-38-41</b>	704343.39	5709988.109	-805.36	227	-30	135.7	104.8	106.02	1.22	79.47
							111.17	112.15	0.98	10
<b>4-38-42</b>	704343.431	5709988.278	-805.99	229	-29	144	105.41	105.53	0.12	1.02
							117.43	119.62	2.19	37.61
<b>2200-1-22-55</b>	704267.022	5709785.721	-319.8	275	-77	46.66	37.08	39.65	2.57	78.76

## APPENDIX B - JORC Code, 2012 Edition

Table 1 – JORC Code 2012 Edition.

### Section 1 Sampling Techniques and Data (Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul style="list-style-type: none"> <li>Drilling since 2008, quoted with PC- prefix is from PC Gold exploration with NQ diameter (47.6mm) drill core was recovered from drilling. Noramco drilling, CP- prefix is BQ diameter (36.5mm). All other quoted intercepts and the bulk of historical drilling data is of NQ diameter including Auteco drilling subject to this release (prefix AUDD**).</li> <li>The core was sawn in half following a sample cutting line determined by geologists during logging and submitted for analysis on nominal 1m (1ft for historical drillholes) intervals or defined by geological boundaries determined by the logging geologist.</li> <li>Samples from PC Gold holes (PC- prefix) post 2008 were submitted to ALS Chemex in Thunder Bay and North Vancouver for analysis. Samples were prepared for analysis using a jaw crusher which was cleaned with a silica abrasive between samples resulting in 90% of the sample passing through an 8 mesh screen. A split of the crushed sample weighing 1000g was then pulverised to 90% passing a 150 mesh screen. Sample pulps were analysed for gold by Fire Assay using 50g sample charge with atomic absorption spectroscopy (AAS) finish. If the returned assay result was equal to or greater than 5g/t then the sample was reassayed by Fire Assay with a gravimetric finish. Samples from historical diamond drilling programs conducted between 1981 and 2008 were dispatched to a variety of accredited laboratories in Canada for Fire Assay analysis. Historical drill results prior to 1981 are Fire Assay conducted by unknown laboratories (most likely the mine laboratory during the operational life of the Pickle Crow Mine) and with unknown preparation methods and assay charge, however previous operators have duplicated and verified results. Recent sampling by Auteco minerals on drill holes subject to this release (prefix AUDD**) were submitted to AGAT Laboratories, Thunder Bay for analysis. Auteco samples undergo the same preparation and analysis techniques previously used for PC Gold.</li> <li>All samples &gt;10g/t gold and samples collected from PC gold drilling (PC- prefix) suspected of nugget gold were additionally sent for pulp metallicity analysis.</li> <li>For a more complete discussion of historical sampling techniques see document 'Updated Mineral Resource Estimate for the Pickle Crow Property, Patricia Mining Division, Northwestern Ontario, Canada' NI-43-101 dated 15 June 2018 and available from System for Electronic Document Analysis and Retrieval (<a href="http://www.sedar.com">www.sedar.com</a>) for First Mining Inc.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</li> </ul>	<ul style="list-style-type: none"> <li>Drilling quoted with PC- prefix is from PC Gold exploration with NQ diameter (47.6mm) drill core was recovered from drilling. Noramco drilling, CP- prefix is BQ diameter (36.5mm). All other drilling is NQ diameter including Auteco drilling subject to this release (prefix AUDD**).</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul style="list-style-type: none"> <li>All drilling quoted is NQ diamond core (including Auteco drilling subject to this release -prefix AUDD**) with the exception of Noramco drillholes (CP- prefix). RQD was recorded for all diamond drilling as per industry standard. A review of the available diamond drill core RQD's from the Pickle Crow project (PC- prefix and recently completed Auteco drilling - AUDD* prefix) indicated that nearly all of the holes produced excellent recoveries with an average of &gt;90%. For drilling conducted by other operators recoveries</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>are unknown although reports do not highlight significant core loss.</p> <ul style="list-style-type: none"> <li>A review of RQD results does not highlight a relationship between sample recovery and grade or highlight any sample bias due to loss of material.</li> </ul>
<b>Logging</b>	<ul style="list-style-type: none"> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>All PC Gold and Auteco samples (PC- and AUDD* hole prefix) were geologically logged. Lithology, veining, alteration, mineralisation and weathering are all recorded in the geology table of the drill hole database. Other historical drillholes have been similarly logged and records have been digitised from report format.</li> <li>Geological logging of Diamond Core samples is qualitative and descriptive in nature.</li> <li>All holes quoted have been logged in their entirety.</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>All drilling quoted from PC Gold and Auteco exploration (PC- and AUDD* hole prefix) is NQ diameter (47.6mm) drill core recovered from drilling. All other quoted intercepts are NQ diameter with the exception of Noramco drilling (CP- Prefix) which is BQ (36.5mm) diameter. The core was sawn in half following a sample cutting line determined by geologists during logging and submitted for analysis on nominal 1m (or 1ft) intervals or defined by geological boundaries determined by the logging geologist.</li> <li>This sampling technique is industry standard and deemed appropriate.</li> <li>PC Gold QA/QC protocols include the use of crush duplicates, ¼ core field duplicates, the insertion of certified reference materials (CRM's) including low, medium and high-grade standards and coarse blanks. This was accomplished by inserting the QA/QC samples sequentially in the drill core sample numbering system. One set of the four QA/QC types were inserted every 30 samples consisting of 1 crush duplicate, 1 ¼ split field duplicate, 1 CRM (altering between low, medium and high standard) and 1 blank. This resulted in approximately every seventh sample being a QA/QC sample. Auteco minerals (AUDD* prefix holes) follows the same QA/QC protocols but with CRM's and duplicates inserted every 25 samples. QAQC procedures are not disclosed in previous reporting but results are consistent with visual observations of mineralisation as recorded in the geological logs and qualitative proportions of logged veining and sulphide content. Post-Mining Pickle Crow Property operators employed the usual in-laboratory blanks, standards and duplicate analyses to ensure precision and accuracy of results. Whilst there is no documentation available for earlier results sample duplicate verification has been conducted.</li> <li>Sample size is deemed industry standard for Orogenic Gold deposits.</li> <li>For a more complete discussion of historical sampling techniques and sample preparation see document 'Updated Mineral Resource Estimate for the Pickle Crow Property, Patricia Mining Division, Northwestern Ontario, Canada' NI-43-101 dated 15 June 2018 and available from System for Electronic Document Analysis and Retrieval (<a href="http://www.sedar.com">www.sedar.com</a>) for First Mining Inc.</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable</li> </ul>	<ul style="list-style-type: none"> <li>Samples were submitted to ALS Chemex in Thunder Bay and North Vancouver for analysis. Samples were prepared for analysis using a jaw crusher which was cleaned with a silica abrasive between samples resulting in 90% of the sample passing through an 8 mesh screen. A split of the crushed sample weighing 1000g was then pulverised to 90% passing a 150 mesh screen. Sample pulps were analysed for gold by Fire Assay using 50g sample charge with atomic absorption spectroscopy (AAS) finish. If the returned assay result was equal to or greater than 5g/t then the sample was reassayed by Fire Assay with a gravimetric finish. Samples from historical diamond drilling programs conducted between 1981 and 2008 were dispatched to a variety of accredited laboratories in Canada for Fire Assay analysis. Historical drill</li> </ul>



Criteria	JORC Code explanation	Commentary
	<p>levels of accuracy (i.e. lack of bias) and precision have been established.</p>	<p>results prior to 1981 are Fire Assay conducted by unknown laboratories (most likely the mine laboratory during the operational life of the Pickle Crow Mine) and with unknown preparation methods and assay charge, however previous operators have duplicated and verified results. Recent sampling by Auteco minerals on drill holes subject to this release (prefix AUDD**) were submitted to AGAT Laboratories, Thunder Bay for analysis. Auteco samples undergo the same preparation and analysis techniques previously used for PC Gold.</p> <ul style="list-style-type: none"> <li>• In addition to the Company QAQC samples (described earlier) included within the batch the laboratory included its own CRM's (Certified Reference Materials), blanks and duplicates.</li> <li>• Sample assay results continue to be evaluated through control charts, log sheets, sample logbook and signed assay certificates to determine the nature of any anomalies or failures and failures were re-assayed at the laboratory. Check assaying was also conducted on 1 in every 20 samples. QAQC protocols are unknown for historical drill programs (without the PC- hole prefix).</li> <li>• QA/QC work is industry standard and acceptable levels of accuracy and precision have been established.</li> <li>• For a more complete discussion of QA/QC techniques and levels of accuracy obtained from historical sampling see document 'Updated Mineral Resource Estimate for the Pickle Crow Property, Patricia Mining Division, Northwestern Ontario, Canada' NI-43-101 dated 15 June 2018 and available from System for Electronic Document Analysis and Retrieval (<a href="http://www.sedar.com">www.sedar.com</a>) for First Mining Inc.</li> </ul>
<p><b>Verification of sampling and assaying</b></p>	<ul style="list-style-type: none"> <li>• The verification of significant intersections by either independent or alternative company personnel.</li> <li>• The use of twinned holes.</li> <li>• Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>• Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>• Historical significant intersections quoted have been verified by Independent Geological Consultants Micon International Limited. For more details see document 'Updated Mineral Resource Estimate for the Pickle Crow Property, Patricia Mining Division, Northwestern Ontario, Canada' NI-43-101 dated 15 June 2018 and available from System for Electronic Document Analysis and Retrieval (<a href="http://www.sedar.com">www.sedar.com</a>) for First Mining Inc.</li> <li>• There are no twinned holes in the dataset but a comparison of the results of different drilling generations showed that results were comparable. In addition previous operators have duplicated and verified results by re-sampling historical core. For more details see document 'Updated Mineral Resource Estimate for the Pickle Crow Property, Patricia Mining Division, Northwestern Ontario, Canada' NI-43-101 dated 15 June 2018 and available from System for Electronic Document Analysis and Retrieval (<a href="http://www.sedar.com">www.sedar.com</a>) for First Mining Inc.</li> <li>• For PC Gold drilling (PC- prefix), once all logging data was completed, core marked up, logging and sampling data was entered directly into the Gems Logger program (an MS Access-based database and stored on the onsite server. At approximately weekly intervals the server onsite was synchronised with the main server in Thunder bay. Only one individual was responsible for synchronising the field and office databases. Auteco records new drilling data in Excel spreadsheet format synchronized with the Auteco server in Perth, Australia.</li> <li>• No adjustments were made to assay data but the procedure to determine which gold assay to enter into the database is as follows. If a pulp metallic assay was performed it was used. If a pulp metallic assay was not performed, then a gravimetric assay was used. If a gravimetric assay was not performed, then the AAS assay was used. If re-assays were performed then the first analysis was used unless a QA/QC investigation proved that the first assay was suspect, in which case the second analysis was then used. For more details of historical procedures see document 'Updated Mineral Resource Estimate for the Pickle Crow Property, Patricia Mining Division, Northwestern Ontario, Canada' NI-43-101 dated 15 June 2018 and available from System for Electronic Document Analysis and Retrieval</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>• Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>• Specification of the grid system used.</li> <li>• Quality and adequacy of topographic control.</li> </ul>	<p>(www.sedar.com) for First Mining Inc. For all drilling not conducted by PC Gold (without the PC- hole prefix) no adjustments were made to the data.</p> <ul style="list-style-type: none"> <li>• Upon completion of PC Gold drillholes collars (PC Gold prefix) were surveyed by third party contractors Delta Surveying and J.D.Barnes of Thunder Bay to with +/- 1m using an SX Blue. For all other drilling hole collars were converted from local grids or digitised from georeferenced maps. Where possible these historical surface drillholes have been re-located, surveyed and verified in the field. Drillhole locations are also recorded by the Ontario Ministry of Northern Development and Mines in freely available GIS datasets. Auteco drilling (AUDD* prefix) has been surveyed with a hand-held GPS to an accuracy of less than 3m.</li> <li>• A variety of down hole survey tools have been used on the property. All holes were surveyed at 50m intervals while drilling using an EZY Shot magnetic compass based tool supplied by the drillers. In conjunction with this, all holes were surveyed after completion with a non-magnetic down-hole instrument. A variety of tools were trialed including Maxibore tool provided by Reflex Instruments, a Deviflex tool operated by TECH Directional services and an SPT North Seeking Gyro. For Auteco drilling subject to this release down hole surveys have been conducted by a REFLEX North Seeking Gyro. For further historical details of survey reproducibility and tools used please refer to document 'Updated Mineral Resource Estimate for the Pickle Crow Property, Patricia Mining Division, Northwestern Ontario, Canada' NI-43-101 dated 15 June 2018 and available from System for Electronic Document Analysis and Retrieval (www.sedar.com) for First Mining Inc. For all drilling not conducted by PC Gold (lacking the PC- prefix) surveys were conducted during drilling with hole orientation recorded by the geologist in the field. Downhole surveys of dip are recorded by azimuths away from the collar are generally lacking.</li> <li>• All location data is in UTM grid (NAD83 Zone 15) except where noted.</li> <li>• Topographic Control for PC Gold and Auteco drilling (PC- and AUDD* prefix) is from a DTM created generated from a LIDAR survey completed in 2008 and are to an accuracy of &lt;1m and verified by drill collar surveys. For all other collar data elevation was estimated from contours provided from SRTM. Topographic control for underground drillhole collars has been digitised from level plans or converted from mine grids. All surface collars have now been projected to a DTM generated from a LIDAR survey completed in 2008 and are to an accuracy of &lt;1m.</li> </ul>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>• Data spacing for reporting of Exploration Results.</li> <li>• Whether the data spacing, and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>• Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>• Due to the nature of mineralisation the hole spacing is highly variable and of a progressive exploration in nature.</li> <li>• Data spacing is considered sufficient to establish geological and grade continuities for mineral resource estimation at the Inferred Category</li> <li>• No sample compositing was applied.</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li>• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>• If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul style="list-style-type: none"> <li>• Drill hole orientations were designed to test perpendicular or sub-perpendicular to the orientation of the intersected mineralisation. Drilling was typically oriented perpendicular to the trend of geophysical anomalism and the mapped strike and dip of observed mineralisation on surface and elsewhere in the project area.</li> <li>• Due to the density of drilling and the orientation of drilling perpendicular to mineralized bodies there is limited bias introduced by drillhole orientation.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>• The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>• For PC Gold and Auteco drilling (PC- and AUDD* prefix), once the core samples are cut, bagged and sealed with zip ties, ten samples are put into rice bags which are sealed and secured with numbered security tags. Once samples arrive at the</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>laboratory the security tags and corresponding samples were verified against onsite logs. Prior to shipment samples are stored in a locked building onsite. Site is always occupied, and no samples are left at the project during field breaks. For all other drillholes the measures taken to ensure sample security are unknown.</p>
<p><b>Audits or reviews</b></p>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>An audit and review of sampling techniques and data was conducted as part of NI-43-101 resource estimation by Independent Consultants Micon International in 2018. Please refer to document 'Updated Mineral Resource Estimate for the Pickle Crow Property, Patricia Mining Division, Northwestern Ontario, Canada' NI-43-101 dated 15 June 2018 and available from System for Electronic Document Analysis and Retrieval (<a href="http://www.sedar.com">www.sedar.com</a>) for First Mining Inc.</li> <li>An additional audit and review of sampling techniques and data was conducted by Cube Consulting as part of the Resource Estimation subject to this release and consisted of an audit of QAQC data from previous operators PC Gold Inc. (2011-2017).</li> </ul>

Section 2 Reporting of Exploration Results (Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
<p><b>Mineral tenement and land tenure status</b></p>	<ul style="list-style-type: none"> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.</li> </ul>	<ul style="list-style-type: none"> <li>The mineral concessions of the Pickle Crow project consist of 106 patented mining claims covering 1,712ha and 88 contiguous, unpatented claims covering approximately 14,048ha. Of the 106 patented claims 98 (the Pickle Crow Lease) are held in the name of Teck Cominco Limited (Teck) and 8 are held in the name of PC Gold. The unpatented claims are held in the name of PC gold. PC Gold has a lease on the 98 patented claims held by Teck which expires in 2067. These leasehold claims are subject to two net smelter return (NSR) royalties totaling 1.25%. The other 8 patented claims (the Crowshore Patents), plus certain unpatented claims are subject to NSR royalties ranging from 2% to 3%. A full list of tenements along with details of relevant NSR's as they pertain to individual properties is given in Auteco ASX releases dated: 28/01/2020 and 17/02/2020. An additional 600 claims were staked by Auteco subsidiary, Revel Resource (JV) Ltd. and are subject to the terms of the Earn-In-Arrangement.</li> <li>Auteco has entered into a binding term sheet agreement to acquire up to 80% of the Pickle Crow Gold Project from First Mining. A payment of C\$50,000 has been made to First Mining. Subject to the completion of a formal agreement, the consideration for acquisition of the assets are as follows: Upon signing a formal agreement: A further C\$50,000 and 25,000,000 Shares in the capital of Auteco at a deemed issue price of A\$0.008 per share. Stage 1 Earn-In (51%): Spending C\$5,000,000 over three years comprising: Spending C\$750,000 within a 12-month period ('Expenditure Payment 1'); and Spending C\$4,250,000 within a 24-month period after Expenditure Payment 1 is satisfied; and Subject to shareholder approval by Auteco, issuing to First Mining 100,000,000 Shares in Auteco. (together 'Stage 1 earn in'). Stage 2 Earn-In (a further 19%): Expending exploration expenditure in the 24-month period commencing on the date that Auteco satisfies the Stage 1 Earn-in of C\$5,000,000 ('Expenditure Payment 3'); and Within 90 days of completing expenditure Payment 3, making a cash payment to Seller in the amount of C\$1,000,000 ('Expenditure Payment 4'), (together the 'Stage 2 Earn In'). Also, Buy In: May buy a further 10% interest by paying C\$3,000,000 to First Mining; and a 2% Net Smelter Return granted after the Stage 2 Earn-In. Further details are included in ASX release (17/02/2020).</li> <li>For a more complete discussion of type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings relating to the Pickle Crow Project please refer to document 'Updated Mineral Resource Estimate for the Pickle Crow Property, Patricia Mining Division, Northwestern Ontario, Canada' NI-43-101 dated 15 June 2018 and available from System for Electronic Document Analysis and Retrieval (<a href="http://www.sedar.com">www.sedar.com</a>) for First Mining Inc.</li> </ul>
<p><b>Exploration done by other parties</b></p>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>The first government survey of the area was performed by William McInnes of the Geological Survey of Canada (GSC) along the Crow River from 1903 to 1905. Prospecting in the Pickle Lake area commenced in 1926. In 1927, Lois Cohen of Haileybury formed a prospecting group and early that winter sent Alex and Murdock Mosher in to stake the first claims (December 1927) on what ultimately became the Central Patricia Gold Mines property. These claims were optioned by F.M Connell and Associates in August 1928 and Central Patricia Gold Mines Limited was incorporated on 19 February, 1929. Diamond drilling commenced at Central Patricia in February 1929 and production in March 1930. The Central Patricia discovery paved the way from exploration in the region which led to the discovery and initial drilling (1929) of the first Pickle Crow orebody the No.1 Vein by Northern Aerial Mineral Exploration Limited, a company set up in 1928 by J.E. (Jack) Hammell. In 1929 gold was also discovered by Albany River Miners Ltd. (Albany River) at the No.16 vein on the Albany River claims to the east of the then Pickle Crow property. Northern Aerial was acquired by Pickle Crow Gold Mines Limited (PCGM) in 1934 with Jack Hammell continuing as president.</li> </ul>

Production from the Pickle Crow mine began on 17 April, 1935. Albany river sank the Albany shaft to a depth of 190m between 1933 and 1938 and completed extensive underground development. Winoga Patricia Gold Mines was created in 1936 and drilled 73 surface diamond drill holes on a pie-shaped property located between PCGM's holdings and the Albany River Mines ground to the east. A mine shaft was subsequently sunk on the property in 1938. That same year, PCGM took over ownership of both Albany River Mines and Winoga Patricia Gold Mines through a new company called Albany River Gold Mines Ltd. It is believed that the Winoga Patricia Gold Mines shaft later became the No.3 Shaft of the Pickle Crow operation. The Cohen-MacArthur zone, located 2km to the north of the developing Pickle Crow mine, was discovered in 1933. A total of 14 surface diamond holes were drilled at Cohen-MacArthur in the winter of 1936. This property was optioned by PCGM in 1938, With the acquisition of the Cohen-MacArthur claims, PCGM became one of the largest land holders in the Pickle Lake area. The GSC completed a regional synthesis of the Pickle Crow Greenstone belt during this period as well. Ground and airborne geophysical surveys have been completed over all or parts of the Pickle Crow property at various times during its early history. A dip-needle survey completed in 1936 on the Pickle Crow property was useful in tracing out the bands of the iron formation. A detailed magnetic survey was carried out over the property by Teck (or its predecessor companies) around 1960. The property then underwent a series of ownerships until it became wholly owned by Teck in 1971. The property then sat dormant until 1973 when Pickle Crow Exploration Ltd. Reviewed the economics of reopening the mine. In 1978, a merger between Pickle Crow Explorations Ltd. And four other companies saw Teck's ownership reduced to 44.6% and a new exploration company called Highland-Crow Resources Ltd. Highland Crow went on to option the property to Galant Gold Mines Limited in 1979. Gallant performed a VLF\_EM geophysical survey and drilled 47 surface diamond drill holes for 7,356m. The only known soil geochemical survey done on the Pickle Crow property was completed for Gallant in 1983. Soil values ranged from 10 to 12,000ppb with the high values attributed to mine tailings and cultural anomalies. In 1983 the property returned to Highland-Crow. Noramco Mining Corp. bought Highland-Crow in 1988. Between 1985 and 1987 Highland-Crow completed line-cutting, magnetometer and IP, geophysical surveying, geological mapping, surface trenching, diamond drilling and environmental baseline studies. Noramco drilled surface exploration holes, completed geophysical surveys and commenced dewatering of the No.1 shaft. Noramco drilled 286 surface diamond drill holes for 46,189m and 79 underground holes for 9,341m. Noramco also commissioned Historic (non-compliant) Resource Estimates. In 1994 Noramco changed its name to Quest Capital. Quest assigned its interest to Pickle Crow Resources Inc. A total of 4 surface diamond drill holes for 2,287m were completed. Quest then sold its interest to Wolfden Resource Inc who entered into an option agreement with Jonpol Explorations Ltd. Who drilled 18 surface diamond holes for 2,173.5m. Wolfden also entered into a surface mining agreement with Cantera Mining Limited in 2000. Canterra commenced building a 225tpd gravity mill on site in 2002 but was placed into receivership in 2004. In 2006 Wolfden transferred Pickle Crow to Premier Gold Mines Ltd. Before the property was sold to PC Gold in 2007. PC Gold then explored the property completing 184 holes for 62,968m by 2011 and 173 holes for 35,840.4m from 2011 to 2014 before commissioning an NI-43-101 compliant Resource Estimate. For further details please refer to document 'Updated Mineral Resource Estimate for the Pickle Crow Property, Patricia Mining Division, Northwestern Ontario, Canada' NI-43-101 dated 15 June 2018 and available from System for Electronic Document Analysis and Retrieval ([www.sedar.com](http://www.sedar.com)) for First Mining Inc.

<b>Geology</b>	<ul style="list-style-type: none"> <li>• Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>• The Pickle Crow Gold Deposit is considered to be an Archean low-sulphide gold-quartz vein type deposit, also known as shear-hosted gold, Archean quartz-carbonate vein gold deposits, Archean lode gold, Archean mesothermal gold deposits or simply orogenic gold. The deposit occurs primarily within mafic volcanics and banded iron formation (BIF) units in the Pickle Crow assemblage of the Pickle Lake Greenstone belt in the Uchi Lake Subprovince of the Superior Craton of the Canadian Shield.</li> </ul>
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li>• A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul style="list-style-type: none"> <li>○ easting and northing of the drill hole collar</li> <li>○ elevation or RL (Reduced Level – elevation above sea level in meters) of the drill hole collar</li> <li>○ dip and azimuth of the hole</li> <li>○ down hole length and interception depth</li> <li>○ hole length.</li> </ul> </li> <li>• If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>• Refer to Appendix A in ASX release 28/01/2020 and 26/03/2020 as well as the current release for drill hole information for all reported drill holes for this JORC 2012 Table 1 and in accordance with ASX listing rule 5.7.2.</li> </ul>
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>• In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>• Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>• The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>• All drill hole intersections are reported above a lower cut-off grade of 0.5g/t Gold or 1g/t as indicated, with no upper cut off grade has been applied. A maximum of 1m internal waste was allowed. Tabulated results are presented in ASX announcements 28/01/2020, 26/03/2020 and Appendix A of this release)</li> <li>• Metal equivalent values are not used</li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li>• These relationships are particularly important in the reporting of Exploration Results.</li> <li>• If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>• If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>• All intersections reported in the body of this release are down hole</li> <li>• The majority of the drill holes are drilled as close to orthogonal to the plane of the mineralized lodes as possible. A number of drill holes have intersected the mineralisation at high angles.</li> <li>• Only down hole lengths are reported.</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>• Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</li> </ul>	<ul style="list-style-type: none"> <li>• Maps and sections are included in the body of this release as deemed appropriate by the competent person.</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li>• Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</li> </ul>	<ul style="list-style-type: none"> <li>• Any significant higher-grade zones in historical drilling quoted in this release have been reported in ASX announcements 28/01/2020, 26/03/2020 and Appendix A of this release)</li> <li>• All results above 0.5g/t lower cut-off or 1g/t quoted in this release have been reported in ASX announcements 28/01/2020, 26/03/2020 and Appendix A of this release)</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>• Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater,</li> </ul>	<ul style="list-style-type: none"> <li>• Appropriate plans are included in the body of this release.</li> </ul>

	geotechnical and rock characteristics; potential deleterious or contaminating substances.	
<b>Further work</b>	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul style="list-style-type: none"> <li>Auteco Minerals Limited is currently conducting drill testing of additional lodes as well as step out and infill drilling of existing lodes to further enhance the resources quoted in this release. More information is presented in the body of this report.</li> <li>Diagrams in the main body of this release show areas of possible resource extension on existing lodes. The company continues to identify and assess multiple other target areas within the property boundary for additional resources.</li> </ul>

### Section 3 Estimation and Reporting of Mineral Resources

Criteria	JORC Code explanation	Commentary
<b>Database integrity</b>	<ul style="list-style-type: none"> <li>Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.</li> <li>Data validation procedures used.</li> </ul>	<ul style="list-style-type: none"> <li>The CP has not undertaken an independent data verification of the data supplied in the databases pertaining to this project. Data compilation and verification was undertaken by company employees and independent consultants to the company, and the Cube accepts that the work was diligently undertaken and does not represent a material risk to the project.</li> <li>The drilling data was supplied to Cube in a MS Excel format. This data has been relied upon as the source data for the 2020 MRE work. Cube compiled the data for importing into a standard resource database in MS Access. Validation checks completed by the Cube included the following work: <ul style="list-style-type: none"> <li>Maximum hole depths check between sample/logging tables and the collar records</li> <li>Checking for sample overlaps</li> <li>Reporting missing assay intervals</li> <li>3D visual validation in Surpac v6.9 of co-ordinates of collar drill holes to topography and UG workings drilling locations</li> <li>3D visual validation of downhole survey data to identify if any inconsistencies of drill hole traces.</li> </ul> </li> <li>No material issues were identified by Cube. No significant errors due to data corruption and transcription have been found.</li> </ul>
<b>Site visits</b>	<ul style="list-style-type: none"> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>Brian Fitzpatrick (Principal Geologist at Cube Consulting) who is the Competent Person for the August 2020 MRE has not undertaken a site visit to date.</li> <li>Due to the worldwide travel restrictions currently in place because of the COVID-19 pandemic, it was not possible for the CP to propose undertaking a site visit prior to the completion of the August 2020 MRE.</li> </ul>
<b>Geological interpretation</b>	<ul style="list-style-type: none"> <li>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</li> <li>Nature of the data used and of any assumptions made.</li> <li>The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> <li>The use of geology in guiding and controlling Mineral Resource estimation.</li> <li>The factors affecting continuity both of grade and geology.</li> </ul>	<ul style="list-style-type: none"> <li>The confidence in the geological interpretation is high as a result of the current knowledge within the limits of the historical Pickle Crow UG workings (1935-1966) and diamond drilling from surface and UG drilling extending out from the workings. Interpreted extensions of mineralised quartz veins have been established through production history and available mapping and UG sampling records. This information has been used to guide and control the mineralisation interpretation and estimation factors. Mineralisation trends are open along strike and down plunge, so continuous review and understanding of lithological and structural controls are required to further increase the degree of precision and accuracy of the geological interpretation beyond the limits of the current information.</li> <li>The data used for the 2020 MRE was comprised of surface and UG diamond drill holes and underground (UG) chip samples. Surface trench sampling results were not used in the June 2020 MRE. UG drilling and sampling locations have not been verified and UG chip sampling intervals were estimated over the true width of the mineralised quartz vein structures. Most of this data is in stoped out areas and is not material to the depleted Resource Estimate.</li> <li>Previous interpretations have separated vein structures and domains into thin mineralised envelopes or interpreted variable thickness waste or dilution haloes around the in-situ</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>mineralisation. Vein thicknesses were determined from the 3D wireframe interpretations and interpolating these thicknesses into the block model. Blocks with interpolated thicknesses less than 1 m were then diluted to 1 m of thickness and reported above the cut-off grade as diluted tonnes and grade. The effect of this method resulted in the reporting of a diluted grade estimate taking into account a minimum mining width of 1 m.</p> <ul style="list-style-type: none"> <li>• The current geological interpretation is based on observations from logged diamond drill core, and the visual mapping in outcrop and underground of vein quartz, BIF hosted, and shear hosted zones within the host sequence. <ul style="list-style-type: none"> <li>○ The most prominent and continuous style of mineralisation is the auriferous quartz vein hosted mineralisation in several steeply dipping NE plunging zones – mined over the life of the Pickle Crow UG as the #1, 2, 5, 6, 7, 8 and 9 Veins.</li> <li>○ The second style of mineralisation at Pickle Crow is the gold-bearing BIF hosted type adjacent to the #1 and #5 vein mineralisation. Auriferous mineralisation comprises stringers and discontinuous lenses of quartz within sulphide replacement iron formation. Mineralisation is generally broader in thickness (3m-10m) but has been logged and mapped as both contorted and tight to isoclinal folded following the trend of the quartz vein hosted mineralisation.</li> <li>○ The shear zone-hosted type of mineralisation has been recorded in the Albany Shaft area. The mineralisation is described as broad, highly complex zones (both lithologically and structurally) of shearing with discontinuous quartz veining, and sulphidic BIF hosted zones.</li> </ul> </li> <li>• Grade distribution plots were created in Surpac to assist with assessing grade continuity along strike, down dip, and to assess if any down plunge component was apparent. Most major mineralised vein structures appear to plunge to the NE and currently open at depth. There are no definitive interpreted major fault structures and dyke intrusives modelled in 3D available for the August 2020 MRE. but available surface geology plans show several porphyry sill/dyke intrusives and minor NW fault structures. Tight to isoclinal folding within the Pickle Crow deposit area has been well recorded from fold structures clearly visible in the BIF units. Intrusives, fault structures and complex folding are likely to have influence over grade continuity at a local scale.</li> </ul>
<b>Dimensions</b>	<ul style="list-style-type: none"> <li>• The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.</li> </ul>	<ul style="list-style-type: none"> <li>• The Mineral Resource area has overall dimensions of 3,800m strike (in a NE direction), 800m width and has been interpreted to extend to 1,800m below surface. Multiple lode systems exist within this area, predominantly within and in close proximity to the historical Shaft #1 and Shaft #3 workings.</li> </ul>
<b>Estimation and modelling techniques</b>	<ul style="list-style-type: none"> <li>• The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</li> <li>• The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource Estimate takes appropriate account of such data.</li> <li>• The assumptions made regarding recovery of by-products.</li> <li>• Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).</li> <li>• In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</li> <li>• Any assumptions behind modelling of selective mining units.</li> <li>• Any assumptions about correlation between variables.</li> <li>• Description of how the geological interpretation was used to control the Resource Estimates.</li> <li>• Discussion of basis for using or not using grade cutting or capping.</li> <li>• The process of validation, the checking process used, the comparison of model data to drill hole data, and use of</li> </ul>	<ul style="list-style-type: none"> <li>• The estimate has been produced by 3D modelling of the lode systems and block model grade estimation using a combination of 2D estimation modelling approach and 3D dynamic interpolation (DK), both using Ordinary Kriging (OK): <ul style="list-style-type: none"> <li>○ The 2D estimation approach using OK was deemed appropriate for the very narrow, linear and continuous zones hosted by quartz veins. Interval composites were generated for the mineralised lode, which were then weighted by their respective widths to calculate an <i>accumulation variable</i>. The accumulation variable for gold was then used for variogram analysis and 2D interpolation of gold grades. The estimated 2D block values were then exported back into 3D space.</li> <li>○ Several quartz vein hosted domains show ribbon-like structures and although the overall dip and dip direction of most of the lodges are consistent, there are enough changes in geometry to require locally varying search ellipse and variogram directions. The dynamic anisotropy search feature in Surpac was used in which the search neighbourhood ellipse dip and dip direction are defined separately for each block approximating the orientation of each of the mineralised zones</li> <li>○ The influence of extreme grade values was reduced by top-cutting where required. The top cut levels were determined using a combination of top-cut analysis tools (grade histograms, log probability plots and CVs). Top cuts were reviewed and applied on a domain basis.</li> </ul> </li> </ul>



Criteria	JORC Code explanation	Commentary
	reconciliation data if available.	<ul style="list-style-type: none"> <li>○ The primary estimation domains are based on the geological wireframing of quartz veins and BIF hosted mineralisation within the Pickle Crow Shear Zone and additional quartz vein and shear zone domains.</li> <li>○ Drill hole sample data was flagged using domain codes generated from 3D mineralisation domains. Sample data was composited over the full downhole interval. There were consequently no residuals. Intervals with no assays were assigned background grades for the compositing routine as these un-assayed intervals in the drill holes were assumed to be waste.</li> <li>○ <i>Interpolation and Search Parameters</i> - For mineralised domains estimated using 2D OK method, variogram ranges and search distances were defined in a rotated horizontal plane. For the 3D DK method, variogram modelling was conducted to provide nugget, sill and range for 3 directions. Variogram maps were initially analysed in plan, east-west and north-south section to confirm continuity trends and to refine parameters for experimental variogram calculation. Interpolation parameters were set to a minimum number of 4 composites and a maximum number of 16 composites for the estimate. Maximum search ellipse of 200 metres was used.</li> <li>○ The maximum distance of extrapolation from data points was half the drill spacing.</li> <li>○ Computer software used for the modelling and block construction was Surpac v.6.9. Snowden Supervisor v.8.12 was used to prepare variogram and search parameters for specific domains.</li> <li>● Check Estimates/ previous estimates/mine production: <ul style="list-style-type: none"> <li>○ For the August 2020 MRE, ID2 estimation was used as a check estimate against the OK estimation, with no significant variations in global estimate results.</li> <li>○ A previous MRE was reported by Micon (2018) with an effective date of 31 August 2016, for First Mining Gold, the owner of the Pickle Crow Deposit at that time. The Resource Estimate was carried out using either OK method or inverse distance squared estimation (ID2) method (for estimation domains where data was limited), based on interpreted narrow high-grade zones. Overall, the lithological controls and mineralisation trends were similar to the 2020 interpretation. The main differences included: the application of a minimum width of 1m applied to the domains for the 2016 model; 2D and DK estimation method applied for the 2020 model; Minor differences in grade estimation and search parameters. Previous work by other consultants in 2011 and 2016 involving data compilation and verification/validation of the historical UG drilling and sampling, along with the compilation of mapping, UG development and stope outlines, and early surface drilling provided support for the completion of the 2020 model and estimation work.</li> <li>○ Pickle Crow Gold Mines (PCGM) acquired the project in 1934 and commercial production at the mine began in 1935. The Pickle Crow mine operated until 1966 during which time it produced 1,446,214 troy ounces of gold and 168,757 troy ounces of silver from 3,070,475 tons of ore milled (at an average grade of 0.47 oz/ton or 16.14 g/t).</li> </ul> </li> <li>● No by-product recoveries were considered</li> <li>● Estimation of deleterious elements was not completed for the MRE. There has been insufficient multi-element assaying completed in order to ascertain any effects of potential deleterious elements. Arsenic is known to be associated with some gold mineralisation but was not estimated for this model.</li> <li>● The parent block size used is 40mE, 5mN and 40m RL and sub-blocked to 2.5mEN x 0.625mN x 2.5mRL. The data spacing has relied on a combination of recent and historic surface diamond drilling, UG drilling and UG chip samples with no particular common sample spacing.</li> <li>● No assumptions of selective mining units were made.</li> <li>● No correlation analysis between gold and other elements has been assessed for the current model. Only gold and silver assays were provided for the June 2020 MRE.</li> <li>● The mineralised domains acted as a hard boundary to control the</li> </ul>

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		<p>June 2020 MRE. The domain interpretations were based on historical UG mining knowledge of the steeply dipping quartz veining known to host gold mineralisation from drill logging and descriptions of mapping and sampling.</p> <ul style="list-style-type: none"> <li>• Gold grade distributions within the estimation domains were assessed to determine if high grade cuts or distance limiting should be applied on a domain by domain basis.</li> <li>• Block model validation was conducted by the following means: <ul style="list-style-type: none"> <li>○ Visual inspection of block model estimation in relation to raw drill data on a section by section basis.</li> <li>○ Volumetric comparison of the wireframe/solid volume to that of the block model volume for each domain.</li> <li>○ A global statistical comparison of input and block grades, and local composite grade (by northing and RL) relationship plots (swath plots), to the block model estimated grade for each domain.</li> <li>○ Comparison the cut grade drill hole composites with the block model grades for each lode domain in 3D.</li> <li>○ No selective UG mining records assigned to stopes or by Vein Number identification are currently available and therefore no reconciliation analysis has been conducted.</li> </ul> </li> </ul>
<b>Moisture</b>	<ul style="list-style-type: none"> <li>• Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</li> </ul>	<ul style="list-style-type: none"> <li>• The tonnages are estimated on a dry basis. Moisture was not considered in the density assignment.</li> </ul>
<b>Cut-off parameters</b>	<ul style="list-style-type: none"> <li>• The basis of the adopted cut-off grade(s) or quality parameters applied.</li> </ul>	<ul style="list-style-type: none"> <li>• All resources are reported at a 3.5 g/t gold lower cut-off which is deemed acceptable based on approximate industry costings associated with the likely mining method (narrow vein underground mining methods).</li> </ul>
<b>Mining factors or assumptions</b>	<ul style="list-style-type: none"> <li>• Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>• Underground (UG) mining is assumed based on historical mining activity at Pickle Crow.</li> <li>• No assumptions on UG mining methods have been made.</li> <li>• No rigorous application has been made of minimum mining width, internal or external dilution for this MRE.</li> <li>• Preliminary SMU analysis is currently being undertaken by Cube to assess the sensitivity of the minimum mining width of the narrow, very high-grade quartz vein hosted domains to dilution.</li> </ul>
<b>Metallurgical factors or assumptions</b>	<ul style="list-style-type: none"> <li>• The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>• No metallurgical factors have been considered as part of the August 2020 MRE</li> <li>• Metallurgical test work was completed by previous operators on the high-grade vein mineralisation at Pickle Crow and are summarised as follows: <ul style="list-style-type: none"> <li>○ Total gold extractions to a maximum exceeding 99% through a combination of gravity and 48-hour cyanide leach bottle rolls</li> <li>○ Gravity recoveries of up to 92.4% of total gold recovered by the Knelson Concentrator prior to cyanide leaching.</li> </ul> </li> <li>• These results are in line with the historical performance of the Pickle Crow Gold mine which operated between 1935 and 1966 with recoveries averaging slightly over 98% recovered through a combination of gravity and cyanidation.</li> </ul>
<b>Environmental factors or assumptions</b>	<ul style="list-style-type: none"> <li>• Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>• No environmental factors have been considered as part of the August 2020 MRE. No assumptions have been made in regard to possible waste and process residue disposal options or the potential environmental impacts of the mining and processing operation. However, the project is the site of historic mining activity, located within an existing mineral field.</li> </ul>
<b>Bulk density</b>	<ul style="list-style-type: none"> <li>• Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.</li> </ul>	<ul style="list-style-type: none"> <li>• Bulk density (BD) assignment was determined by laboratory BD sampling.</li> <li>• PC Gold completed BD measurements on 2,602 samples of mineralised and unmineralised diamond drill core and select grab</li> </ul>

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	<ul style="list-style-type: none"> <li>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.</li> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	<p>samples from old stockpiles onsite from the Pickle Crow property (Micon, 2018). The majority of the samples were measured by Accurassay of Thunder Bay, Ontario using the water displacement method. BD was assigned within the block model attribute 'density' according to rock types: Vein Quartz = 2.7; BIF Unit = 3.21; Waste Rock = 2.83.</p> <ul style="list-style-type: none"> <li>There were no considerations required for BD based on weathering profiles or porosity, as the mineralised quartz veins domains interpreted for this Resource Estimate lie entirely within the primary or fresh sulphide zone.</li> </ul>
<b>Classification</b>	<ul style="list-style-type: none"> <li>The basis for the classification of the Mineral Resources into varying confidence categories.</li> <li>Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	<ul style="list-style-type: none"> <li>The Mineral Resource has been entirely classified as Inferred. The Pickle Crow Deposit has been subject to mining since 1935 and historical workings demonstrate grade and geological continuity. When assessing the combination of current drilling, historic drilling and underground chip samples used in the August 2020 MRE, no particular common sample grid exists. While data quality control is lacking for the majority of historic UG drilling and sampling used, a moderate amount of well controlled and industry standard recent drilling and re-sampling provides some validation of the information to support the estimation and classification of a Mineral Resource.</li> <li>The August 2020 MRE results appropriately reflects the Competent Person's view of the deposit.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of Mineral Resource Estimates.</li> </ul>	<ul style="list-style-type: none"> <li>Internal peer review has been completed by Cube which verified the technical inputs, methodology, parameters and results of the estimate.</li> </ul>
<b>Discussion of relative accuracy/ confidence</b>	<ul style="list-style-type: none"> <li>Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource Estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.</li> <li>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</li> <li>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</li> </ul>	<ul style="list-style-type: none"> <li>It is the CP's opinion that reported Inferred Resources are appropriate for the level of accuracy and confidence in the August 2020 MRE for Pickle Crow. This is in part based on the accuracy and precision of the assay determinations in the UG historical data which are unknown and only partially validated. There also exists potential errors in relation to the chip sample locations and the accuracy of the digitised UG workings and UG hole collar locations. In spite of these inaccuracies, the grade and tonnage discrepancies are minimal as much of these areas have not been stoped out, and the depleted material margin of error is within reasonable limits for Inferred Resource category.</li> <li>Modelling for the August 2020 MRE has provided an understanding of the global grade distribution but not the local grade distribution. The Mineral Resources constitute a global Resource Estimate.</li> <li>Relative accuracy and confidence of the Inferred Resource Estimate is supported by a successful history of commercial production at the Pickle Crow Gold Mine which produced 1.5 Million oz @ 16 g/t Gold between 1935 and 1966.</li> </ul>