

#### ASX ANNOUNCEMENT

Pickle Crow Gold Project, Canada

# More exceptional drilling results highlight potential for increase in 1.7Moz gold Resource

Latest intersections extend known mineralisation in high-grade areas as well as the alteration-hosted gold which is potentially amenable to bulk mining; Resource update set for Feb 2022

#### **KEY POINTS**

• Drilling of high-grade vein extensions outside the vein hosted Resource in the Shaft 1 and Shaft 3 areas continues to deliver significant intersections, including:

0	2.0m @ 68.3g/t gold from 470.7m in hole AUDD0200	(136.6 gt*m)
0	2.1m @ 31.8g/t gold from 246.4m in hole AUDD0229	(66.8 gt*m)
0	4.1m @ 11.2g/t gold from 423.8m in hole AUDD0200	(45.3 gt*m)
0	4.7m @ 6.3g/t gold from 732.8m in hole AUDD0196	(29.6 gt*m)
0	2.4m @ 9.9g/t gold from 18.7m in hole AUDD0214	(23.3 gt*m)
0	3.1m @ 6.9g/t gold from 370.7m in hole AUDD0183	(20.9 gt*m)
0	1.0m @ 10.6g/t gold from 556.3m in hole AUDD0189	(10.6 gt*m)
0	0.3m @ 34.2g/t gold from 559.7m in hole AUDD0193	(10.3 gt*m)

- The current high-grade vein hosted Resource at Pickle Crow stands at 1.47Moz at 10.1g/t
- The alteration hosted Resource, which is predominantly Banded Iron Formation (BIF), currently totals 240,000oz at 3.7g/t gold and is potentially amenable to bulk mining
- Initial exploration targeting of BIF mineralisation near Shaft 1 returned an intersection of:
  - 19.5m @ 3.3g/t gold from 340.7m in hole AUDD0220 (63.2 gt\*m)
- Follow-up drilling at the Carey discovery demonstrates further potential for bulk mineralisation. Significant intersections returned included:

0	4.0m @ 9.9g/t gold from 266.6m in hole AUDD0194	(39.1 gt*m)
0	11.5m @ 1.5g/t gold from 163.5m in hole AUDD0181	(17.5 gt*m)
0	1.5m @ 10.3g/t gold from 90.4m in hole AUDD0180	(15.4 gt*m)
0	7.0m @ 2.0g/t gold from 289m in hole AUDD0188	(14.0 gt*m)

- First-pass exploration drilling on the Carey trend ~600m to the north-east intersected shallow high-grade gold, with intersections including:
  - o 0.5m @ 84.0g/t gold from 8.2m in AUDD0167 (42.0 gt\*m)
- 5 diamond rigs are currently drilling on site
- An updated Resource estimate remains on track for delivery in February 2022
- AuTECO remains well funded for its growth strategy, with A\$16.4M in cash at 30 September 2021



AuTECO Minerals Ltd (AUT.ASX) ('AuTECO' or 'the Company') is pleased to report more outstanding drilling results which will help underpin a Resource update in the coming quarter.

The latest intersections from the 50,000m drilling program underway at the Pickle Crow project in Ontario, Canada continue to extend the known mineralisation outside the 1.7Moz Resource at 8.1g/t gold<sup>1</sup>.

AuTECO currently has five diamond drill rigs operating with a dual focus on Resource expansion and near-mine exploration. This includes growing the high-grade vein Resource, which comprises 1.47Moz at 10.1g/t, and the alteration-hosted Resource of 240,000oz at 3.7g/t.

It is envisaged that the higher and lower grade areas could potentially be mined using the same access infrastructure and a common processing plant, enabling the ore to be blended. However, the alteration-hosted areas would be mined using bulk mining methods.

In the high-grade veins, Resource expansion drilling in the Shaft 1 and Shaft 3 areas have returned significant drill intersections which increase the known extent of mineralised structures that comprise the current Resource. Results include a 120m step-out from the Vein 13 Resource intersecting 2.0m @ 68.3g/t gold.

Near-mine exploration for alteration-hosted mineralisation with bulk mining potential is in progress. Testing of a banded iron target near Shaft 1 delivered an intersection grading 19.5m @ 3.3g/t gold, further demonstrating the potential for mineralisation amenable to bulk mining methods in the Pickle Crow area. Additional results on the targeted BIF drilling are expected during the quarter.

Follow-up drilling of the Carey prospect continues to define broad mineralisation outside of the initial discovery area. Key results include 4m @ 9.9g/t, 11.5m @ 1.5g/t and 7.0m @ 2g/t gold. Furthermore, a conceptual step-out 600m to the north-east of the Carey-Albany area intersected 0.5m @ 84g/t gold at a shallow depth of 8.2m down the hole.

Drilling of the Tyson discovery is in progress, with assay results expected during the current quarter and into 2022.

AuTECO Executive Chairman Ray Shorrocks said: "These drilling results are exceptional and pave the way for a Resource update in February next year.

"Drilling continues to define mineralisation well outside of the current 1.7Moz Resource.

'The results also support our plan to establish higher and lower-grade areas which can be mined using different methods but would take advantage of the same access infrastructure and processing plant, delivering significant economic benefits."

<sup>&</sup>lt;sup>1</sup> For details on the Pickle Crow Resource estimate, and all future references, please refer to ASX release dated 15 July 2021

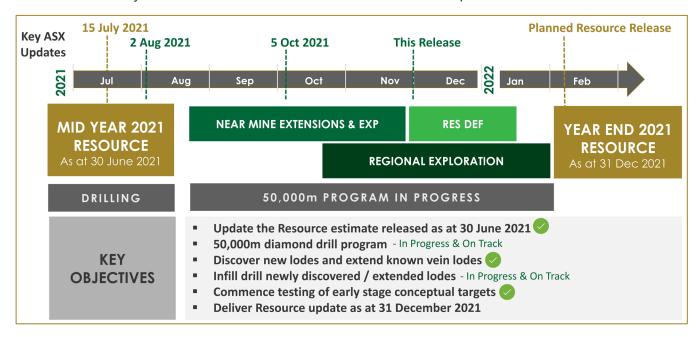




#### ABOUT THE EXPLORATION PROGRAM

Following the success of the previous 45,000 metre drill campaign that delivered a 71% increase in the Inferred Resource to 1.7 million ounces of gold at a grade of 8.1g/t, the board of AuTECO approved an additional 50,000 metres of drilling in June 2021. The dual strategy of driving nearmine Resource growth combined with early-stage exploration targeting will continue to be the focus of the drilling program (Figure 1). A Resource update as at 31 December 2021 is scheduled for release in February 2022.

To date 27,500m of the program has been completed for 63 drill holes. A fifth rig has recently commenced on site to take advantage of favourable drill access conditions during the Canadian winter. The additional rig also ensures that the 50,000 metre program is on track to conclude in Q1 2022 despite the delays in July-August 2021 due to wildfire risk. Assay turn-around is variable, with the average 3 month rolling average reducing to 21 days. This is significantly ahead of industry standards for assay turnaround time in both Canada and Australia at present.



**Figure 1:** Current AuTECO strategic work plan and key objectives from July 2021 until the scheduled release of the year end Resource update in December 2021. Please note that timeframes are indicative.

#### **EXPLORATION AND GEOLOGICAL DETAIL**

## **Deposit Overview**

#### **Geological Setting**

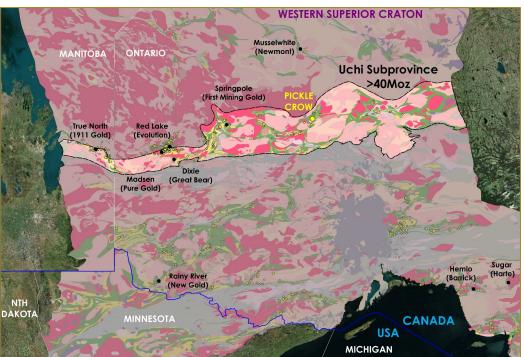
The Pickle Crow deposit is located in the Uchi-Birch sub-province of the Archean aged Superior Craton (Figure 2). AuTECO manages approximately 500 square kilometres of tenure in the northern Pickle Lake greenstone belt (Figure 3).

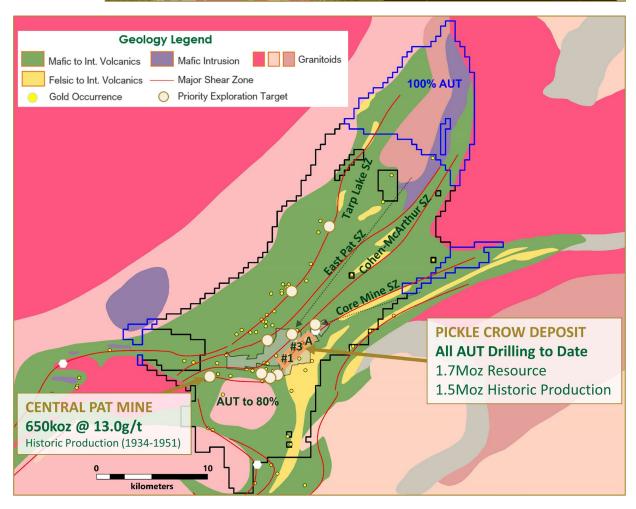
The Pickle Crow deposit is a typical Mesothermal narrow-vein high grade Archean orogenic gold deposit, with mineralised veins present within local structures formed within a broader Riedel shear zone.





Figure 2: Location of the Pickle Crow deposit within the Uchi subprovince of the Superior Craton, Ontario, Canada





**Figure 3:** Geology and mining claims managed by AuTECO in the northern Pickle Lake greenstone belt. Note all work has been conducted by AuTECO to date is within the orange box.



#### Mineralisation and Historic Production

There are two main styles of mineralisation (Figure 4) at the Pickle Crow deposit:

- Quartz vein hosted mineralisation
- Alteration hosted mineralisation (BIF or Porphyry)

Mining at the Pickle Crow deposit between 1935 and 1966 produced 1.5Moz of gold at a head grade of 16.1g/t. The historic production was sourced entirely from the vein-style mineralisation, mined from more than 10 individual quartz reefs.

To date >30 individual veins have been identified proximal to underground shaft infrastructure (Shaft 1, Shaft 3, and Albany Shaft).

Exploration results in this report have been grouped based on proximity to the main historic shafts.

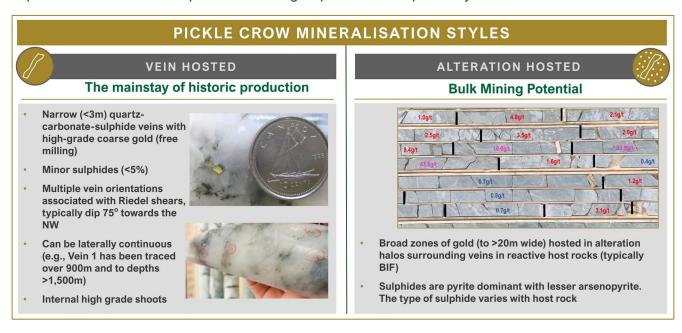


Figure 4: Summary of mineralisation styles at the Pickle Crow gold deposit

#### **Mineral Resource**

The Inferred Mineral Resource for the Pickle Crow project as at 30 June 2021 is 6.6Mt @ 8.1g/t for 1.7Moz of gold (Table 1). The reported Resource was subdivided based on the mineralisation style.

Mineralisation Domain	Cut off	Tonnes (Mt)	<b>Grade</b> (g/t)	Gold (Moz)	$\Delta$ to Sept. 2020
Quartz Lodes	3.5 g/t	4.5	10.1	1.47	+0.47Moz
Alteration (BIF) Hosted	2.0 g/t	2.1	3.7	0.24	+0.24Moz
TOTAL INFERRED RESOURCE	E	6.6	8.1	1.71	+0.71Moz

Table 1: Inferred Mineral Resource estimate for the Pickle Crow deposit as at 30 June 2021



## **Drilling Strategy**

The drilling strategy undertaken in recent months is consistent with the broader AuTECO organic growth plan (Figure 5).

A phased approach to drilling was undertaken, with initial work programs targeting new mineralisation outside of the existing Resource, followed by infill drilling aiming to add additional Resource.

Drilling between July and October focused on key extensional targets inside the patented mining claims, predominantly in the Shaft 3 area and at the newly discovered Tyson veins. Near mine exploration targets were also tested in the Shaft 1 and Albany-Carey area.

During November, the focus shifted to infill drilling of newly identified mineralisation that will culminate in a Resource update planned for release in February 2021.

#### PATHWAY TO PRODUCTION LONG TERM GROWTH **GROWTH &** RESOURCE **PATHWAY TO EXPLORATION UPDATE PRODUCTION** Continue the dual strategy of Complete an updated In anticipation of success, **Near Mine** Resource growth Mineral Resource Estimate, commence high level activities and Regional Discovery prepared in accordance with to demonstrate the pathway to the JORC Code (2012 Edition) focused exploration production Mid-year 2021 update Commencement of Board approval for a further Advanced Exp permitting 50,000m of drilling completed (6.6Mt @ 8.1g/t for 1.71Moz) Conceptual optimisation and Between 4 and 6 drill rigs on development option reviews site at any one time Update interpretation for based on MY2021 Resource At least 1 dedicated to new drill results regional or near-mine High level Assessment of milling Continue re-interpretation conceptual exploration infrastructure and the remainder focused and re-sampling of historic on Resource additions drilling High level assessment of UG infrastructure and re-access Continue generative work Update Resource as at 31 (mapping, surface sampling, options and capital December 2021 geophysical data acquisition) requirements

**Figure 5:** AuTECO organic growth pathway to March 2022. Please note that timeframes are indicative.

## **Shaft 1 and Shaft 3 Extension Drilling**

Drilling on the Core Mine trend in the Shaft 3 and Shaft 1 areas has identified numerous mineralised vein-style structures outside of the current mineral Resource. Recent drill intersections returned include:

0	2.0m @ 68.3g/t gold from 470.7m in hole AUDD0200	(136.6 gt*m)
0	2.1m @ 31.8g/t gold from 246.4m in hole AUDD0229	(66.8 gt*m)
0	4.1m @ 11.2g/t gold from 423.8m in hole AUDD0200	(45.3 gt*m)
0	4.7m @ 6.3g/t gold from 732.8m in hole AUDD0196	(29.6 gt*m)
0	2.4m @ 9.9g/t gold from 18.7m in hole AUDD0214	(23.3 gt*m)
0	3.1m @ 6.9g/t gold from 370.7m in hole AUDD0183	(20.9 gt*m)
0	9.4m @ 1.5g/t gold from 106.5m in hole AUDD0195	(14.4 gt*m)
0	1.0m @ 10.6g/t gold from 556.3m in hole AUDD0189	(10.6 gt*m)
0	0.3m @ 34.2g/t gold from 559.7m in hole AUDD0193	(10.3 gt*m)



A plan map showing the collar locations of recent significant intersections in the Shaft 1 and Shaft 3 areas is presented in Figure 6.

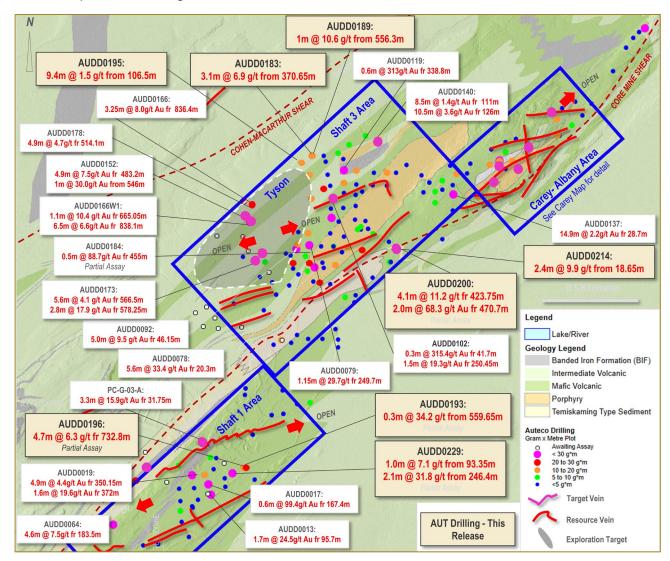
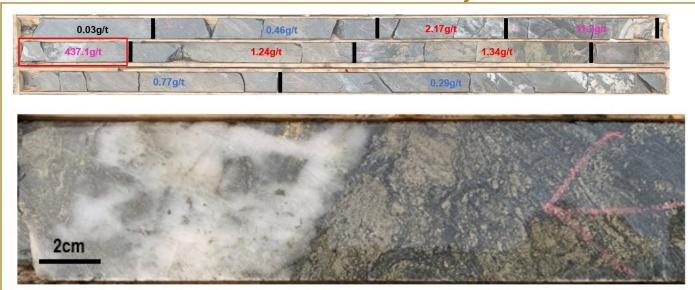


Figure 6: Location of recent significant drill intersections in the Shaft 1 and Shaft 3 areas.

Recent results include a 120m step-out hole drilled down plunge of the Vein 13 resource, with hole AUDD0200 intersecting 2.0m at 68.3g/t gold from 470.7m in vein style mineralisation (Figure 7). The veining cross cuts a conglomerate unit with semi-massive pyrite-pyrrhotite layers.

Step out drilling in the Shaft 1 area discovered a new vein that was previously unknown in hole AUDD0229. Mineralisation is contained in a quartz-carbonate-scheelite vein that contains visible gold within a sheared mafic volcanic unit. Figure 8 shows a photograph of the core with assays noted. Figure 9 is a photograph of the coarse visible gold observed in the drill core.





**Figure 7:** Upper Photograph: drill core (with assays) from hole AUDD0200. The intersection graded 2.0m @ 68.3g/t gold. Lower Photograph: Close up showing coarse visible gold encountered a multi-phase quartz vein. The individual assay returned a grade of 437.1g/t gold



**Figure 8:** Photograph of the intersection in hole AUDD0229 grading 2.1m @ 31.8g/t gold from 246.4m at Shaft 1. Gold occurs within quartz-carbonate-scheelite veins as small clusters (<5mm) and in blebs at the margin of shear veins.



Figure 9: Photograph of coarse visible gold at the sheared vein margins in hole AUDD0229.



## **Banded Iron (BIF) Hosted Alteration Mineralisation Exploration**

A first-pass exploration campaign was undertaken to test the potential for broad alteration hosted mineralisation in an interpreted banded iron formation adjacent to the Core Mine Shear proximal to Vein 5 in the Shaft 1 area.

The assay results for the first hole in the program have been returned, with an intersection of **19.5m @ 3.3g/t gold** successfully demonstrating the potential for mineralisation amenable to bulk mining (Figure 10 and 11).

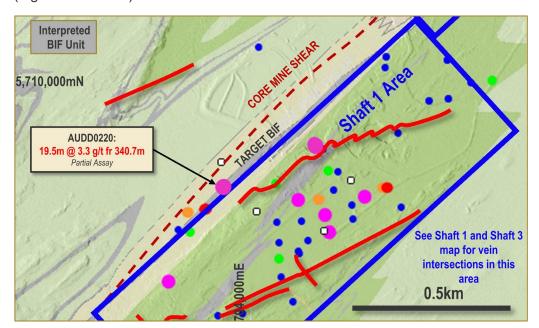


Figure 10: Map showing the location of BIF intersection in hole AUDD0220

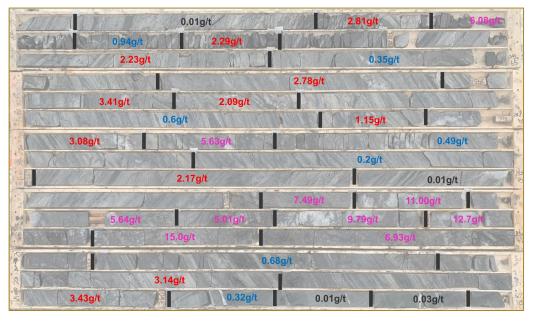


Figure 11: Core photo of the BIF mineralisation in hole AUDD0220 (19.5m @ 3.3g/t) The consistent mineralisation is coincident with qtz, pyrrhotite, Py, +/- Asp

Further results from the BIF exploration program are expected during the quarter.



### **Carey-Albany Drilling**

Follow up drilling in the Carey discovery area continues to intersect shallow, broad widths of alteration hosted mineralisation combined with high grade vein hosted mineralisation (Figure 12). This continues to support the bulk mining potential of the Carey area. Recent intersections include:

0	4.0m @ 9.9g/t gold from 266.6m in hole AUDD0194	(39.1 gt*m)
0	11.5m @ 1.5g/t gold from 163.5m in hole AUDD0181	(17.5 gt*m)
0	1.5m @ 10.3g/t gold from 90.4m in hole AUDD0180	(15.4 gt*m)
0	7.0m @ 2.0g/t gold from 289m in hole AUDD0188	(14.0 gt*m)

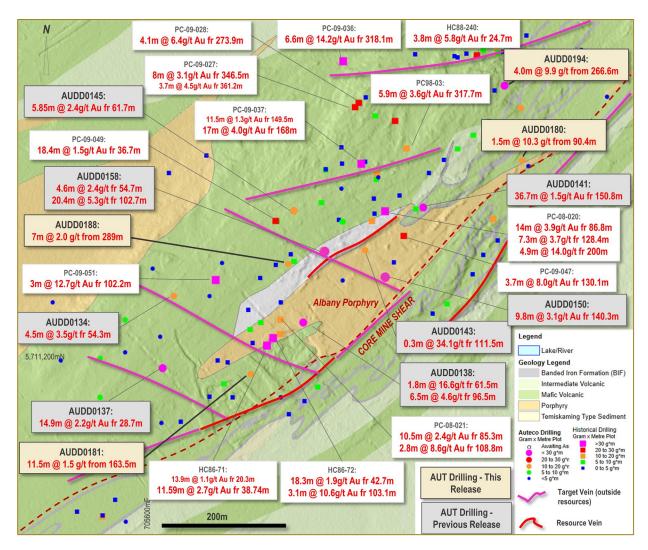
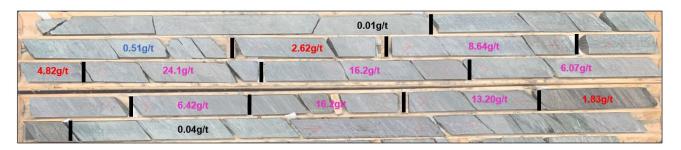


Figure 12: Map of drillhole collars in the Carey-Albany area. AuTECO drilling is highlighted.

Hole AUDD0194 was drilled in the northern Carey-Albany area and successfully intersected 4.0m @ 9.9g/t gold in banded iron alteration hosted mineralisation (Figure 13)



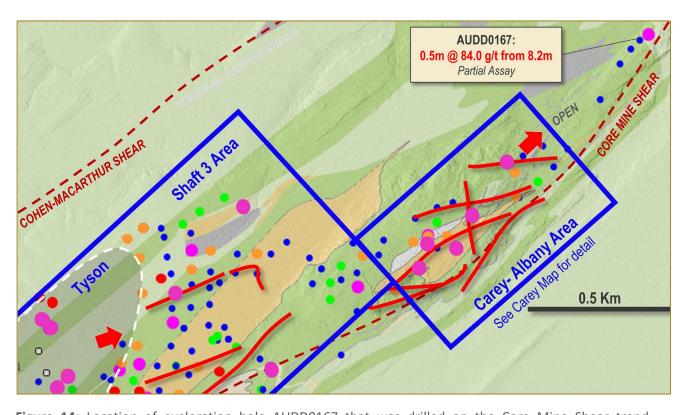


**Figure 13:** AUDD0194: 4.0m @ 9.9g/t gold from 266.6m. Mineralisation is alteration hosted and associated with pyrite replacement of iron minerals in Banded Iron Formation. Free gold was observed in the core as small 1mm size particles. Surrounding volcaniclastics exhibit strong sericite-ankerite-pyrite alteration.

An exploration hole was drilled ~600 metres north-east of Carey-Albany on the Core Mine shear trend (Figure 14). This drill hole intersected a shallow high-grade intersection of:

o 0.5m @ 84.0g/t gold from 8.2m in AUDD0167 (42.0 gt\*m)

Further work is planned in the North Carey area during 2022.



**Figure 14:** Location of exploration hole AUDD0167 that was drilled on the Core Mine Shear trend approximately 600 metres north of Carey-Albany. A result of 0.5m @ 84.0g/t gold from 8.2 metres down hole demonstrates the trend is fertile north of the Carey discovery.



#### **FORWARD WORK PLAN**

Drilling is scheduled to continue with 5 drill rigs on site. The program for the remainder of 2021 will be focused predominantly in the near mine environment, with results expected to contribute to an updated Resource estimate anticipated for completion in February 2022.

Infill drilling of the Tyson discovery is in progress, with first results anticipated during the December quarter. The Tyson drilling will continue into the March quarter of 2022.

Regional exploration will accelerate in the January quarter as access to priority exploration targets is assisted by favourable conditions over the Canadian winter.

For and on behalf of the Board.

**Mr Ray Shorrocks** 

Executive Chairman Auteco Minerals Ltd

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#### **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 subprovince of Ontario, Canada.

The Pickle Crow Gold Project currently hosts a JORC 2012 Mineral Resource of 1.7 Moz at 8.1g/t gold, with a 50,000m drilling program underway to expedite Resource growth.

Pickle Crow is one of Canada's highest-grade gold mines – historically producing 1.5 Moz at 16g/t gold.

The Company also has a joint venture on the Limestone Well Vanadium-Titanium Project in Western Australia.

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





#### COMPETENT PERSONS 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 28/01/2020, 26/03/2020, 29/06/2020, 01/09/2020, 11/11/2020, 19/01/2021, 7/04/2021, 16/06/2021, 15/07/2021, 2/8/2021 and 5/10/2021. Auteco confirms that it is not aware of any new information or data that materially affects the information included in the original announcements. The Company confirms that the form and context in which the Competent Persons' findings are presented have not been materially modified from the original market announcements.

The information in this announcement that relates to new Exploration Results 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.

#### NOTE

As announced on 15 July 2021, "Resource increases 71% to 1.7Moz", Auteco confirms that it is not aware of any new information or data that materially affects the information included in the original announcement and that all material assumptions and technical parameters underpinning the estimates in the original announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Persons' findings are presented have not been materially modified from the original market announcement.

#### **DISCLAIMER**

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

#### FORWARD LOOKING INFORMATION

Various statements in this announcement constitute statements relating to intentions, future acts and events. Such statements are generally classified as "forward looking statements" and involve known and unknown risks, uncertainties and other important factors that could cause those future acts, events and circumstances to differ materially from what is presented or implicitly portrayed herein. The Company gives no assurances that the anticipated results, performance or achievements expressed or implied in these forward-looking statements will be achieved.





## **APPENDIX A: DRILLING RESULTS**

## **TABLE 1: Significant Intercept Table – Auteco Drilling**

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	То	Width	Assay	Comment
riole No.	Lasting	Northing	Lievation	Azimuth	ыр	(m)	(m)	(m)	(m)	g/t Au	Comment
							83.75	84.75	1.00	1.28	
							126.05	127.00	0.95	1.11	
AUDD0150	705964	5711328	350	200	50	252	140.30	150.10	9.80	3.07	
							190.30	190.70	0.40	9.04	
							237.45	237.80	0.35	1.13	
AUDD0164	704485	5710851	340	160	57	585	215.75	216.05	0.30	5.55	
AUDD0167	706640	F742002	245	220	F0	144	8.15	8.65	0.50	84.00	
AUDD0167	706648	5712082	345	320	50	144	88.55	89.65	1.10	0.96	
AUDD0168	705615	5711100	351	180	55	267	101.80	102.30	0.50	1.87	
							127.50	129.50	2.00	2.69	
							152.60	153.60	1.00	1.91	
ALIDD0160	705146	E711E02	220	190	70	621	223.60	224.60	1.00	1.13	
AUDD0169	705146	5711502	338	180	78	621	267.85	269.20	1.35	2.62	
							320.60	320.90	0.30	5.26	
							587.20	587.55	0.35	2.27	
							213.00	213.35	0.35	4.33	
							219.80	221.95	2.15	2.08	
							229.20	230.00	0.80	1.01	
							256.65	257.05	0.40	2.27	
							266.70	267.30	0.60	2.32	
AUDD0173	704549	5710828	340	160	62	600	284.40	284.80	0.40	2.24	
AODDOITS	704343	3710020	340	100	02	000	355.35	355.65	0.30	1.06	
							447.50	447.80	0.30	1.81	
							466.55	467.30	0.75	1.05	
							566.50	572.05	5.55	4.09	
							575.95	576.80	0.85	2.48	
							578.25	581.05	2.80	17.86	
AUDD0174	706548	5711976	348	180	45	171	24.10	24.50	0.40	1.81	
	, 555-5	5,115,0	3 70	100	,5	-/-	107.60	107.90	0.30	1.12	
AUDD0175	706477	5711848	348	160	45	87				NSA	
							81.75	82.30	0.55	1.02	
							94.60	94.90	0.30	1.76	
AUDD0176	705559	5711261	357	180	57	411	193.80	194.20	0.40	1.14	
							277.40	279.20	1.80	3.23	
							388.50	388.85	0.35	4.10	
							88.20	89.10	0.90	1.27	
AUDD0177	706205	5711651	347	180	60	282	214.00	214.35	0.35	1.59	
							245.50	246.00	0.50	1.50	



Holo No	Fasting	Novthing	Florestion	A = i un v th	Dia	Drilled Length	From	То	Width	Assay	Commont		
Hole No.	Easting	Northing	Elevation	Azimuth	Dip	(m)	(m)	(m)	(m)	g/t Au	Comment		
							49.15	49.65	0.50	1.06			
							262.80	263.10	0.30	17.40			
						861	433.30	433.65	0.35	1.38			
							514.05	518.90	4.85	4.70			
						inc:	514.05	516.10	2.05	10.43			
							526.30	526.90	0.60	2.19			
							528.90	529.30	0.40	2.16			
AUDD0178	704489	5711151	338	160	57		534.60	535.70	1.10	4.09			
							567.15	567.45	0.30	1.19			
							572.35	572.70	0.35	1.04			
							574.90	577.00	2.10	2.03			
							604.30	604.75	0.45	3.27			
							609.00	609.90	0.90	6.92			
							619.60	620.10	0.50	2.33			
							590.60	592.00	1.40	1.06			
							22.30	22.60	0.30	2.38			
							280.70	281.00	0.30	1.70			
							289.00	289.50	0.50	2.01			
					62	62	62		340.00	340.30	0.30	1.11	
AUDD0179	704586	5710883	340	160				62	62	606	343.40	343.70	0.30
7.10220173	70.000	37 20000	0.0	200	02		395.55	395.95	0.40	3.37			
							402.90	403.20	0.30	8.70			
							426.55	427.95	1.40	2.44			
							431.95	432.90	0.95	14.08			
							463.50	463.80	0.30	7.77			
							9.00	10.00	1.00	1.01			
							16.00	16.75	0.75	2.10			
							62.00	64.00	2.00	1.56			
AUDD0180	706,178	5,711,511	347	0	55	348	90.35	91.85	1.50	10.28			
							109.00	110.00	1.00	1.62			
							273.00	274.10	1.10	6.73			
							286.80	288.15	1.35	6.98			
							324.00	324.30	0.30	15.00			
							41.00	42.00	1.00	1.23			
							91.35	94.30	2.95	1.37			
							128.85	129.20	0.35	1.75			
ALIDD0191	705 755	E 711 177	251	20	- C - C	500 5	137.00	138.00	1.00	1.37			
AUDD0181	705,755	5,711,177	351	30	55	509.5	141.05	141.90	0.85	1.10			
							149.70	150.00	0.30	1.51			
							153.30	154.30	1.00	1.53			
							163.50	175.00	11.50	1.52			
							1819.00	182.45	0.55	1.64			





Hole No.	Easting	Northing	Elevation	Azimuth	Dip	Drilled Length	From	То	Width	Assay	Comment
noic no.	Lusting	rtor timig	Licvation	Azimutii	J.P	(m)	(m)	(m)	(m)	g/t Au	Comment
							225.60	227.30	1.70	0.89	
							336.55	337.00	0.45	2.44	
							416.40	417.20	0.80	2.56	
							23.30	24.15	0.85	7.54	
							28.00	28.35	0.35	1.62	
ALIDD0103	705 000	F 711 41F	264	210		405	41.40	41.95	0.55	1.85	
AUDD0182	705,898	5,711,415	361	210	55	405	227.40	228.65	1.25	2.25	
							305.80	306.20	0.40	1.23	
							340.30	341.15	0.85	3.35	
							47.45	48.05	0.60	1.11	
							78.70	79.80	1.10	1.76	
							113.15	114.35	1.20	2.33	
							257.95	258.25	0.30	3.08	
AUDD0183	704,857	5,711,397	341	180	56	636	312.25	312.55	0.30	1.86	
AUDD0183	704,857	5,711,397	341	180	30	030	370.65	373.70	3.05	6.86	
							379.75	380.05	0.30	3.80	
							404.80	405.80	1.00	4.26	
							503.85	504.85	1.00	1.09	
							636.65	636.95	0.30	1.66	
							75.45	75.95	0.50	2.55	
							93.45	93.80	0.35	4.35	
							113.70	114.20	0.50	1.27	
							122.05	123.90	1.85	1.09	
							146.90	147.95	1.05	1.66	
							152.35	153.95	1.60	1.96	
							231.40	231.80	0.40	1.65	
							235.00	236.50	1.50	2.04	
AUDD0184	704,586	5,710,868	342	160	72	564	271.65	274.00	2.35	1.29	Partial Assay
							281.40	281.70	0.30	1.54	
							333.15	333.45	0.30	1.31	
							359.20	359.80	0.60	2.16	
							374.70	375.05	0.35	1.58	
							385.00	385.30	0.30	1.07	
							389.95	390.30	0.35	1.08	
							455.00	455.50	0.50	88.70	
							532.25	533.05	0.80	1.09	
							32.00	35.45	3.45	1.16	
							38.30	38.75	0.45	2.71	
AUDD0185	705,899	5,711,414	360	140	55	312	68.65	70.45	1.80	2.27	
WODD0192	703,833	J,/11,414	300	140	33	217	109.00	111.85	2.85	2.19	
							136.05	136.85	0.80	1.52	
							161.10	161.40	0.30	1.07	





Hole No.	Easting	Northing	Elevation	Azimuth	Dip	Drilled Length	From	То	Width	Assay	Comment
Hole No.	Lusting	rtor tilling	Elevation	Azimuth	D.P	(m)	(m)	(m)	(m)	g/t Au	Comment
							193.65	193.95	0.30	13.00	
							236.20	236.65	0.45	1.54	
							241.05	245.10	4.05	2.32	
							269.00	269.60	0.60	14.82	
							79.40	79.75	0.35	1.20	
AUDD0186	705,899	5,711,323	355	210	55	288	93.70	94.00	0.30	1.15	Dartial Accay
AUDD0186	703,699	5,/11,525	333	210	33	200	140.95	142.55	1.60	2.09	Partial Assay
							211.00	211.50	0.50	1.87	
AUDD0187	704,604	5,710,821	342	160	55	429	164.25	169.00	4.75	1.07	Partial Assay
							17.35	18.60	1.25	3.74	
							72.15	73.00	0.85	1.84	
							89.50	90.60	1.10	1.27	
							95.80	96.65	0.85	2.81	
							120.60	121.10	0.50	1.69	
							159.00	159.50	0.50	2.07	
AUDD0188	705,814	5,711,349	359	210	55	315	185.80	186.50	0.70	10.00	
							199.70	200.00	0.30	15.00	
							204.00	205.00	1.00	1.68	
							233.40	234.20	0.80	2.85	
							257.10	257.80	0.70	2.28	
							274.00	276.00	2.00	1.84	
							289.00	296.00	7.00	1.98	
							345.25	346.25	1.00	1.27	
							443.40	445.00	1.60	2.75	
							456.50	458.70	2.20	2.36	
AUDD0189	704,857	5,711,397	341	180	65	699	470.70	471.00	0.30	1.33	
AUDDU169	704,657	5,/11,59/	341	100	05	099	524.50	525.00	0.50	1.21	
							547.00	547.35	0.35	2.43	
							556.25	557.25	1.00	10.60	
							578.40	578.80	0.40	4.40	
ALIDD0100	704 645	5 710 712	2/12	160	55	205	110.55	110.85	0.30	3.71	
AUDD0190	704,645	5,710,713	342	160	55	305	113.60	114.25	0.65	1.22	
							15.05	15.00	0.75	1.51	
							41.95	46.65	4.70	1.27	
							82.75	84.30	1.55	6.04	
AUDD0192	705,867	5,711,371	358	140	55	309	90.80	91.80	1.00	1.11	
70000137	703,807	J,/11,3/1	330	140	JJ	303	82.75	100.70	17.95	1.00	
							133.65	134.65	1.00	1.69	
							157.45	169.30	11.85	1.15	
							199.35	200.30	0.95	2.38	
AUDD0193	704,488	5,709,717	351	277	77	654	236.30	236.70	0.40	2.08	
WODD0133	704,400	3,103,111	231	2//	′′	034	559.65	559.95	0.30	34.20	





Hole No.	Easting	Northing	Elevation	Azimuth	Dip	Drilled Length	From	То	Width	Assay	Comment
noie No.	Easting	Northing	Elevation	Azimuth	Dip	(m)	(m)	(m)	(m)	g/t Au	Comment
							644.80	645.20	0.40	1.76	
							27.85	28.55	0.70	1.63	
							129.00	129.35	0.35	12.00	
							215.95	216.25	0.30	1.08	•
AUDD0194	706,152	5,711,627	355	180	65	351	250.75	251.05	0.30	9.81	
							266.55	270.50	3.95	9.89	
							283.00	283.95	0.95	3.60	
							106.50	115.85	9.35	1.54	
							289.80	290.20	0.40	1.33	
							339.80	340.40	0.60	3.53	
							357.00	359.00	2.00	2.20	
AUDD0195	704,800	5,711,360	339	180	56	645	385.25	385.55	0.30	1.12	Partial Assay
							409.70	410.00	0.30	1.06	
							571.10	571.40	0.30	3.56	
							589.85	590.30	0.45	1.15	
							620.00	621.00	1.00	3.81	
AUDD0196	704,503	5,709,717	350	764	77	284	732.80	737.50	4.70	6.27	
AUDD0197	706,272	5,711,683	346	180	55	369	23.80	24.25	0.45	1.39	Partial Assay
							31.00	32.00	1.00	1.11	·
AUDD0198	704,083	5,710,174	343	145	45	252		N	SA		
AUDD0199	704,474	5,710,476	345	160	55	351					Awaiting Assay
							181.35	182.15	0.80	2.09	-
							246.25	246.60	0.35	4.06	
							262.75	268.35	5.60	1.09	
						510	423.75	427.80	4.05	11.19	
AUDD0200	705,308	5,710,898	344	260	70		449.85	450.15	0.30	9.43	
							463.30	463.90	0.60	2.78	
							465.85 470.70	466.25	0.40	1.44	
						inc	470.70	472.70 471.60	2.00 0.30	68.28 437.10	
						inc:	489.05	489.40	0.35	1.22	
							29.70	30.00	0.30	6.12	
							64.50	66.40	1.90	3.37	
AUDD0201	703,640	5,709,032	352	180	55	249	133.00	133.90	0.90	2.61	
.10000201	, 55,040	3,,03,032	332	100	55	273	192.10	196.70	4.60	2.74	
							232.90	233.25	0.35	1.23	-
							429.60	431.15	1.55	3.66	
							460.00	461.05	1.05	1.36	
							498.40	499.00	0.60	2.09	•
AUDD0202	704,920	5,711,393	339	180	65	694	648.75	649.45	0.70	1.59	Partial Assay
							653.05	653.40	0.35	3.78	_
						666.30	671.00	4.20	1.05	-	





Hole No.	Easting	Northing	Elevation	Azimuth	Dip	Drilled Length	From	То	Width	Assay	Comment
						(m)	(m)	(m)	(m)	g/t Au	
AUDD0203	704,640	5,710,000	347	145	65	165	78.30	80.10	1.80	1.61	Partial Assay
							107.10	107.50	0.40	1.04	
411000004	704.640	F 740 000	247	405	7.5	4.45	112.90	113.20	0.30	1.15	
AUDD0204	704,640	5,710,000	347	195	75	145	115.20	115.65	0.45	1.57	
							116.60	116.90	0.30	2.36	
AUDD0205	703,958	5,709,804	342	145	60	264					Awaiting Assay
AUDD0206	703,688	5,709,031	352	180	55	261					Awaiting Assay
AUDD0207	704,623	5,710,770	341	160	55	483					Awaiting Assay
AUDD0208	703,740	5,709,055	352	180	55	258					Awaiting Assay
AUDD0209	704,343	5,710,965	339	165	68	801					Awaiting Assay
AUDD0210	704,226	5,710,554	342	160	65	645					Awaiting Assay
AUDD0211	704,694	5,710,407	343	180	65	387					Awaiting Assay
AUDD0212	704,294	5,709,580	350	240	55	111					Awaiting Assay
AUDD0213	704,349	5,710,467	344	160	55	471					Awaiting Assay
AUDD0214	705,308	5,710,898	344	260	65	600	18.65	21.00	2.35	9.90	Partial Assay
AUDD0215	704,269	5,710,478	343	160	55	537					Awaiting Assay
AUDD0216	704,332	5,710,525	343	160	55	531					Awaiting Assay
AUDD0217	705,308	5,710,898	344	260	77	624					Awaiting Assay
AUDD0218	704,512	5,710,885	340	160	65	712					Awaiting Assay
AUDD0219	704,482	5,710,961	339	162	62	822					Awaiting Assay
AUDD0220	703,965	5,709,717	342	175	65	382	340.70	360.15	19.45	3.25	Partial Assay
AUDD0221	705,308	5,710,898	344	280	65	528					Awaiting Assay
AUDD0222	705,308	5,710,898	344	284	70	522					Awaiting Assay
AUDD0223	704,381	5,709,744	350	300	60	372		289			Awaiting Assay
AUDD0224	704,073	5,709,640	349	140	65	235		180			Awaiting Assay
AUDD0225	703,509	5,709,006	351	180	45	305		300			Awaiting Assay
AUDD0226	704,287	5,710,585	342	160	60	644					Awaiting Assay
AUDD0227	705,308	5,710,898	344	289	75	690					Awaiting Assay
AUDD0228	703,509	5,709,006	351	180	60	306					Awaiting Assay
ALIDEOSSO	704 424	F 700 COC	250	200	F.0	463	93.35	94.30	0.95	7.06	Dantial Acco
AUDD0229	704,431	5,709,686	350	300	58	462	246.40	248.50	2.10	31.84	- Partial Assay







## **APPENDIX B - JORC CODE, 2012 EDITION**

### Table 1 – JORC Code 2012 Edition

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <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 1m 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> <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 at 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 lin determined by geologists during logging and submitted for analysis on nominal 1m (1ft for historical drillholes) intervals or defined by geological boundaries determine by the logging geologist.</li> <li>Samples from PC Gold holes (PC- prefix) post 2008 we 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 is Canada for Fire Assay analysis. Historical drill results prior to 1981are 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 verifie 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 co</li></ul>
Orilling techniques	<ul> <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-</li> </ul>	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).



sampling bit or other type, whether

AUDD\*\*).



Criteria	JORC Code explanation	Commentary
	core is oriented and if so, by what method, etc).	
Drill sample recovery	<ul> <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>	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 >90%. For drilling conducted by other operators recoveries are unknown although reports do not highlight significant core loss.  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.
Logging	<ul> <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> <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>
Sub-sampling techniques and sample preparation	<ul> <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> <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. Whist there is no documentation available for earlier</li> </ul>



laboratory tests  of the assaying a procedures used technique is con  • For geophysical handheld XRF in parameters used analysis including model, reading till factors applied a  • Nature of quality adopted (eg standuplicates, exter and whether acc accuracy (i.e. lace	results sample duplicate verification has been conducted.  Sample size is deemed industry standard for Orogenic Gold deposits.  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 (www.sedar.com) for First Mining Inc.  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
laboratory tests  of the assaying a procedures used technique is con  • For geophysical handheld XRF in parameters used analysis including model, reading till factors applied a  • Nature of quality adopted (eg standuplicates, exter and whether accaccuracy (i.e. lace	conducted.  Sample size is deemed industry standard for Orogenic Gold deposits.  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 (www.sedar.com) for First Mining Inc.  Samples were submitted to ALS Chemex in Thunder Bay and laboratory ed and whether the insidered partial or total. In tools, spectrometers, instruments, etc, the
	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 1981are 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.  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.  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).  QA/QC work is industry standard and acceptable levels of accuracy and precision have been established.  For a more complete discussion of QA/QC techniques and levels of accuracy obtained from historical sampling see document 'Updated Mineral Resource Estimate for
Verification of sampling and assaying • The verification of intersections by alternative comp • The use of twinn	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.  of significant y either independent or  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.  of significant y either independent or



## Criteria JORC Code explanation Commentary • Documentation of primary data, data Canada' NI-43-101 dated 15 June 2018 a

- Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.
- Discuss any adjustment to assay data.
- 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.
- 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 (www.sedar.com) for First Mining Inc.
- 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.
- 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 preformed 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 (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.

Location of data points

- 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.
- Specification of the grid system used.
- Quality and adequacy of topographic control.
- 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.
- 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 nonmagnetic down-hole instrument. A variety of tools were trialed including Maxibore tool provided by Reflex Instruments, a Devifelx tool operated by TECH







Criteria	JORC Code explanation	Commentary
		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.  All location data is in UTM grid (NAD83 Zone 15) except where noted.  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 <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 <1m.
Data spacing and distribution	<ul> <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> <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>
Orientation of data in relation to geological structure	<ul> <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> <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>
Sample security	The measures taken to ensure sample security.	<ul> <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 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.</li> </ul>



Criteria	JORC Code explanation	Commentary
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	<ul> <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 (www.sedar.com) 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)

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#### **JORC Code explanation**

#### Commentary

Mineral tenement and land tenure status

- 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.
- 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.
- 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.
- 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 12month 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







Criteria	JORC Code explanation	Commentary
		<ul> <li>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 (www.sedar.com) for First Mining Inc.</li> </ul>
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	• 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. 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, w



Criteria	JORC Code explanation	Commentary	
	Total Code explanation	airborne geophysical surveys have been completed or all or parts of the Pickle Crow property at various time during its early history. A dip-needle survey completed 1936 on the Pickle Crow property was useful in traciniout the bands of the iron formation. A detailed magnet survey was carried out over the property by Teck (or i 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 19 a merger between Pickle Crow Explorations Ltd. And four other companies saw Teck's ownership reduced 44.6% and a new exploration company called Highlan 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 Pickl Crow property was completed for Gallant in 1983. Soi values ranged from 10 to 12,000ppb with the high valuattributed to mine tailings and cultural anomalies. In 18 the property returned to Highland-Crow. Noramco Mining Corp. bought Highland-Crow completed line-cutting magnetometer and IP, geophysical surveying, geologi mapping, surface trenching, diamond drilling and environmental baseline studies. Noramco drilled surfa exploration holes, completed geophysical surveys and commenced dewatering of the No.1 shaft. Noramco drilled 286 surface diamond drill holes for 46,189m an 79 underground holes for 9,341m. Noramco also commissioned Historic (non-compliant) Resource Estimates. In 1994 Noramco changed its name to Que Capital. Quest assigned its interest to Pickle Crow Resources Inc. A total of 4 surface diamond drill holes 2,287m were completed. Quest then sold its interest twoffen Resource Inc. who entered into an option agreement with Jonpol Explorations Ltd. Who drilled 1 surface diamond holes for 2,173.5m. Wolfden also entered	es din g tic state of the state
		from System for Electronic Document Analysis and Retrieval (www.sedar.com) for First Mining Inc.	
Geology	<ul> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul> <li>The Pickle Crow Gold Deposit is considered to be an Archean low-sulphide gold-quartz vein type deposit, a known as shear-hosted gold, Archean quartz-carbona vein gold deposits, Archean lode gold, Archean mesothermal gold deposits or simply orogenic gold. T deposit occurs primarily within mafic volcanics and banded iron formation (BIF) units in the Pickle Crow</li> </ul>	te



Criteria	JORC Code explanation	Commentary
		assemblage of the Pickle Lake Greenstone belt in the Uchi Lake Subprovince of the Superior Craton of the Canadian Shield.
Drill hole Information	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:  easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in meters) of the drill hole collar dip and azimuth of the hole down hole length and interception depth hole length.  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.	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.
Data aggregation methods	<ul> <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> <li>All drill hole intersections are reported above a lower cutoff 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, 29/06/2020, 01/09/2020, 11/11/2020, 19/01/2021, 07/04/2021, 16/06/2021, 15/07/2021, 02/08/2021 and Appendix A of this release)</li> <li>Metal equivalent values are not used</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul> <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> <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>
Diagrams	<ul> <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>	Maps and sections are included in the body of this release as deemed appropriate by the competent person.
Balanced reporting	<ul> <li>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low</li> </ul>	<ul> <li>Any significant higher-grade zones in historical drilling quoted in this release have been reported in ASX</li> </ul>



Criteria	JORC Code explanation	Commentary
	and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	announcements 28/01/2020, 26/03/2020 and Appendix A of this release)  • 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, 29/06/2020, 01/09/2020, 11/11/2020, 19/01/2021, 07/04/2021, 16/06/2021, 15/07/2021, 02/08/2021, 5/10/2021 and Appendix A of this release)
Other substantive exploration data	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, geotechnical and rock characteristics; potential deleterious or contaminating substances.	Appropriate plans are included in the body of this release.
Further work	<ul> <li>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale stepout 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> <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>

